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January, 1955

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SOAP

and Chemical Specialties

On this issue...

Soap makers meet; preview
new marketing techniques

* * *

Antimicrobial floor waxes—are
they effective in sanitizing?

* * *

Chlorinated detergents tops
for machine dishwashing use

* * *

Newest aerosol application:
dispenser of dry powders

Cover photo . . . Winner of CSMA
sponsored aerosol packaging contest
as "best in show" is Lilly Dache's
"Invisible Net" hair spray of Gen-
eral Beauty Products, Inc., New
York. Can is a Crown "Spraytainer."



NOW!



LIQUID CAUSTIC POTASH

in Non-Returnable Drums

No Deposit

Re-usable



6 OUTSTANDING ADVANTAGES

- 1 Ends storage, rehandling, and return shipment troubles and costs
- 2 Ends deposits, record-keeping and rentals
- 3 Can be re-used or re-sold
- 4 Lighter and easier to handle—up to 71 lbs. less weight
- 5 In some locations delivered cost is actually lower*
- 6 Each drum is brand new and I.C.C. approved

*Contact your nearest SOLVAY Sales Office or distributor for local delivered prices.

Soda Ash • Snowflake® Crystals • Potassium Carbonate • Calcium Chloride • Sodium Bicarbonate
Ammonium Bicarbonate • Cleaning Compounds • Caustic Potash • Sodium Nitrite • Caustic Soda
Ammonium Chloride • Chlorine • Monochlorobenzene • Para-dichlorobenzene • Methylene Chloride
Chloroform • Ortho-dichlorobenzene • Methyl Chloride • Carbon Tetrachloride

SOLVAY now makes available for the first time to users of liquid caustic potash, a new light-weight metal drum that is non-returnable . . . requires no deposit . . . and is lighter and easier to handle!

These new containers have been designed to eliminate many of the problems and expenses that have long been associated with the use of the old-fashioned, heavier, non-returnable drums. Now users of SOLVAY liquid Caustic Potash can take advantage of the savings realized from the elimination of return freight charges . . . as well as the re-use and re-sale value of these sturdily constructed, highly desirable containers.

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Pick up greater profits . . . round out your line! Here is our popular, powerful Glytone to make of every prospect a customer, of every customer a friend.

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Schools, offices, factories, hotels, hospitals and restaurants are all discovering the new magic of quick-working Glytone. By cutting down on disease-carrying bacteria, Glytone reduces lost man-hours in industry, absenteeism in schools. By freshening stale air, Glytone improves relationships between doctor and patient, employee and employer, hotel and guest.

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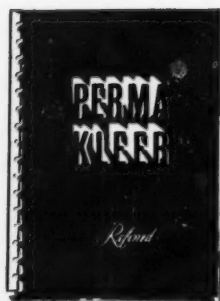
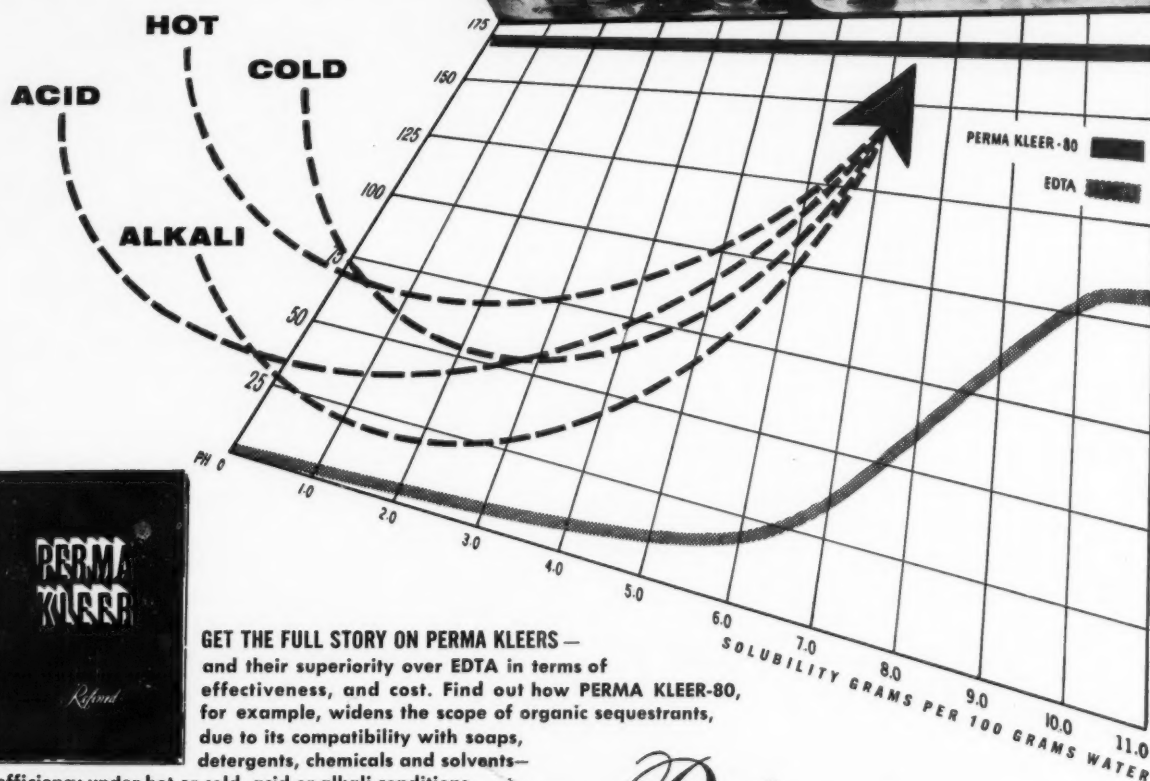
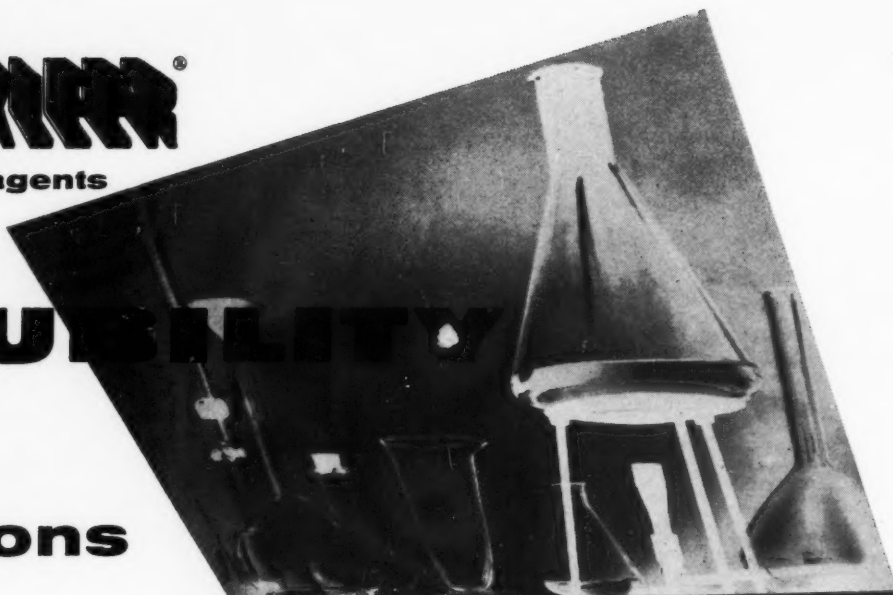
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SOAP

and Chemical Specialties

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New triple pressed stearic acid from Armour

NEO-FAT® 18-55 STABILITY GIVES YOUR PRODUCTS EXTRA LIFE!

They'll look fresher!

Neo-Fat 18-55 in your finished product means long product life with *no color change*! Unlike ordinary stearic acids, Neo-Fat 18-55 will not turn yellow—even under extended time in storage, high temperature processing and long product life! It was produced by Armour's patented low temperature solvent crystallization process which guarantees a material with color stability *built in*! Chemical ester and concentrated acid tests, as well as severe field tests, have proved that Neo-Fat 18-55 keeps products from changing color—keeps them looking fresher!

They'll smell fresher!

Neo-Fat 18-55 will resist odor-causing rancidity longer than the stearic acid you are now using! The best proof of that is the Tennessee Eastman test—acids are heated for 2 hours at 200° C. and the lightest final color indicates the greatest resistance to rancidity. Of seven competitive acids tested, Neo-Fat 18-55 was found to have by far the lightest color—Lovibond $5\frac{1}{4}$ ", 1.1R—5Y!

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Neo-Fat 18-55 resists oxidation and breakdown longer than ordinary stearic acids! Its peroxide index—measuring the amount of oxygen that has combined or reacted with the fatty acid—is only 0.1!

Send today for samples of Neo-Fat 18-55—the finest triple pressed stearic acid you can buy. Send for samples of Armour's economical double and single pressed stearics, too. Test them all against the raw materials you're now using. You'll choose Armour Neo-Fats to make your products look fresher, smell fresher, stay fresher!



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Please send me samples of:

- ☐ Neo-Fat 18-55 (Triple pressed) ☐ Neo-Fat 18-54 (Double pressed)
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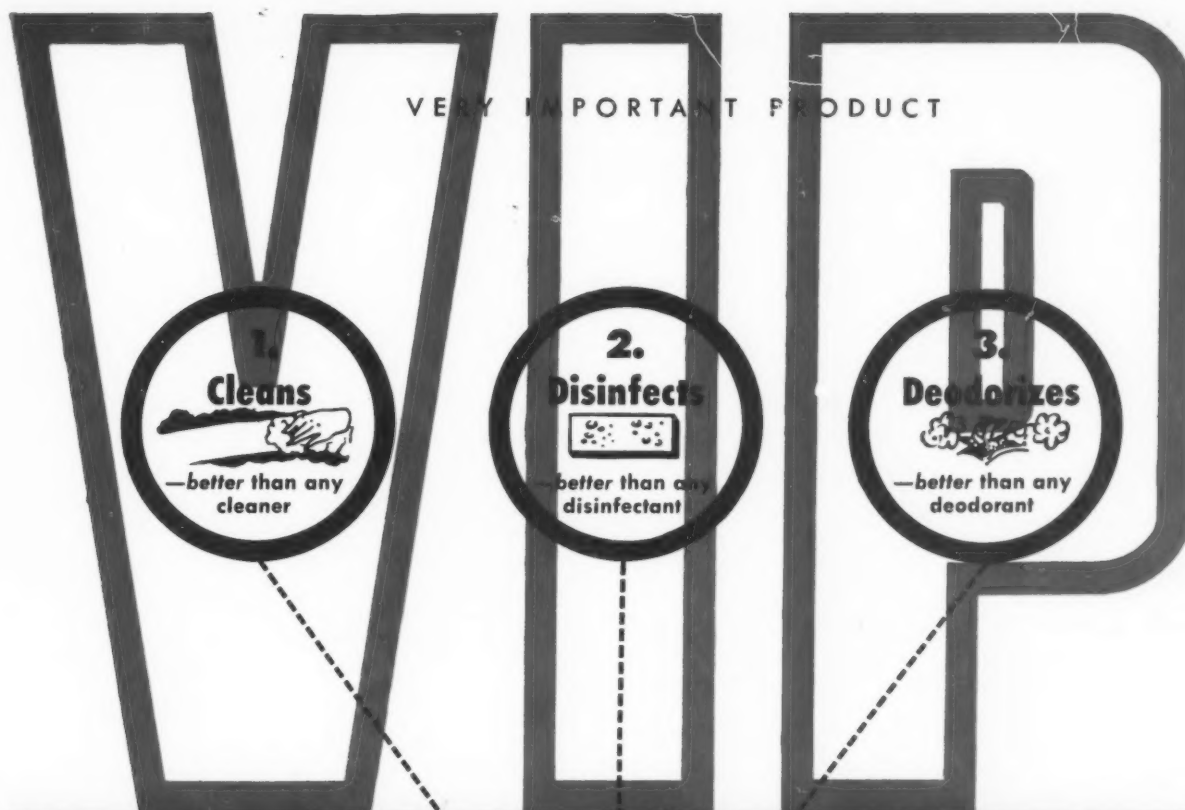


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SOAP and CHEMICAL SPECIALTIES



VIP GERMICIDAL LIQUID DETERGENT

Does All 3 Better—In 1 Application

NO SCRUBBING!

Phenol Coefficient 6

It amazes every new VIP user to see how quickly VIP removes embedded grime and scummy soap film by just gliding the mop across the floor. Before your astonished eyes, VIP restores dead, gray, streaky floors to original beauty—not after hours of rub and scrub—but in a few effortless minutes. Does it in hard, soft, or cold water!

The germicides in VIP end stubborn odors for good by killing the very bacteria, germs, fungi and molds that cause them!



Specify and use VIP for any premise or surface* you wish to keep clean, sanitized and odor-free—with a minimum of cost, time and effort.

- * No abrasives, acids or alkalis. Cleans by bland chemical action!
- * Safe for every type floor or surface.* You name it—VIP cleans it better.
- * Kills common disease germs, athlete's foot fungus, toilet seat germs, etc., etc.
- * Does not mask odors—destroys them totally—and washes away germs that cause them.
- * Removes dangerous slippery soap film. Filmless floors stay clean far longer!

*Safe for marble • terrazzo • asphalt or rubber tile • linoleum • cork • mosaic • terra cotta • varnished or oiled floors • soft or hard wood • desks • furniture • refrigerators • carpets • machinery

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Next time, when you need phosphates—call *Monsanto*.

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Phosphates
Made by
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Phosphoric Acid
and many other products
derived from Elemental
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From the World's Largest Producer of Elemental Phosphorus

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Don't wander everywhere, and wonder where you can get the *right* scent. Just come to Norda.

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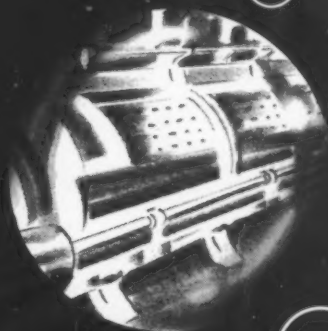
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washing

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cleaning



More sales opportunities for you
with this all-purpose detergent...

SULFRAMIN* HD BEADS

Spray Dried Alkyl Aryl Sulfonate

Yes, you'll find a ready, profitable market for Sulframin HD Beads, Ultra's popular all purpose detergent, among restaurants and institutions in your territory. And you'll find that once customers try these fine-quality High Detergent Beads they'll keep on buying them—give you a steady repeat business.

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MORE PROFITS for those who want to

- sell the finest product money can buy for wax removal and surface cleaning
- save money on freight costs
- compound their own wax removers and surface cleaners

CANDY'S BRIGHT BEAUTY WAX REMOVER SURFACE CLEANER

WATER EMULSION

ALL PURPOSE

Properly used, BRIGHT BEAUTY cleaner will remove water emulsion wax from any floor without harmful effects to floor or floor coloring. It is the perfect all purpose surface cleaner and waxed floor maintenance wax remover. Pleasant odors (lemon or sassafras) crystal clear colors (natural yellow, red or green) and thorough cleaning action produce satisfied customers everywhere. For use on all floors with all types of equipment. The properties and appearance of BRIGHT BEAUTY cleaner are not affected by having been hard frozen then thawed and agitated. Before making any decisions regarding packaging your own cleaner, fully investigate BRIGHT BEAUTY . . . we are sure you will bear out our conclusions after all tests and trials.

THE COMPLETE CLEANER—READY TO USE FOR

WAX REMOVAL		SURFACE CLEANING	
RATIO OF WATER TO CLEANER	OZS. CLEANER PER GAL. WATER	RATIO OF WATER TO CLEANER	OZS. CLEANER PER GAL. WATER
15/16% CONCENTRATE	10-1	50-1 to 30-1	2½ oz. to 4 oz.
11/12% CONCENTRATE	7-1	40-1 to 25-1	3 to 5 oz.

SPECIFICATIONS:

15/16% Concentrate is available in 55, 30 and 15 gal. drums, 5 gal. pails, and cartons of 4 one-gallon glass jugs. (Net weight 8.72 lbs. per gal.)

11/12% Concentrate is available in 55, 30 and 15 gal. drums, 5 gal. pails, and cartons of 4 one-gallon glass jugs. (Net weight 8.64 lbs. per gal.)

30/32% Concentrated Concentrate is available in part full packages for dilution to 11/12% and 15/16% concentrates. (Net weight, 9.12 lbs. per gal.)

46/48% Concentrated Concentrate is available only in full 55 gal. drums, (net weight 520 lbs., 9.4 lbs. per gal.).


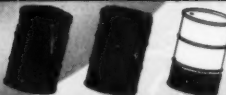

CANDY'S DISTRIBUTION AND SALES POLICY

Our products are available for private brand resale and are sold only through Distributors except for experimental accounts in Chicago essential to research.


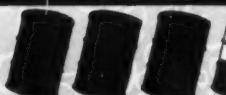

FOR THOSE WHO WANT TO COMPOUND THEIR OWN CLEANER

Two methods are available—(1) By purchasing 30/32% solid content concentrated concentrate in part full containers, you need add only water and agitate containers by rolling and stirring contents. (2) By purchasing 46/48% solid content concentrated concentrate, you add water only in suitable mixing equipment to produce the retail package of the solid content percentage you desire. The charts below show compounding results for our recommended retail solid content percentages. Remember, you pay freight only on the 520 lbs. (net weight) of 46/48% cleaner and save the cost of shipping the water you add when you do your own compounding.

TO COMPOUND 15/16% CONCENTRATED CLEANER

WE SHIP	YOU ADD	YOU SELL
		
1 DRUM (520 LBS.) 46/48% CONCENTRATED CONCENTRATE + 2½ DRUMS WATER = 3 DRUMS (178½ GAL.) 15/16% CONCENTRATE		

TO COMPOUND 11/12% CONCENTRATED CLEANER

WE SHIP	YOU ADD	YOU SELL
		
1 DRUM (520 LBS.) 46/48% CONCENTRATED CONCENTRATE + 3½ DRUMS WATER = 4 DRUMS (240 GAL.) 11/12% CONCENTRATE		

WAX SPECIALISTS FOR OVER 60 YEARS

Candy & Company, Inc.

2515 WEST 35TH STREET, CHICAGO 32, ILLINOIS

For TOUGH Detergent Problems...

General Chemical

ANHYDROUS

SODIUM

METASILICATE

Look at these advantages!

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A carefully-sized material made to meet exacting handling and formulating needs.

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Ideal for formulating with TSP, STPP, other phosphate builders.

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Both bags and drums have special heavy-duty asphalt barriers to protect its free-flowing properties and prevent moisture pickup during shipment and storage.

Clear Solutions

Dissolves readily to give clear, sediment-free solutions.

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Extremely low in iron, other undesirable impurities.

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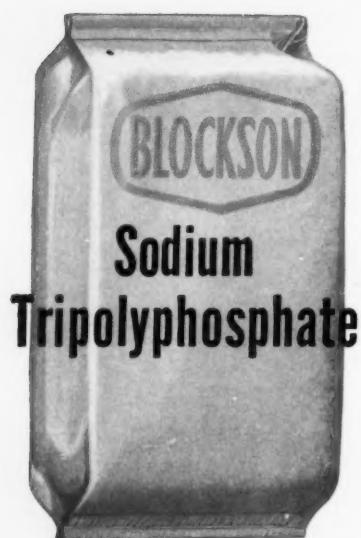
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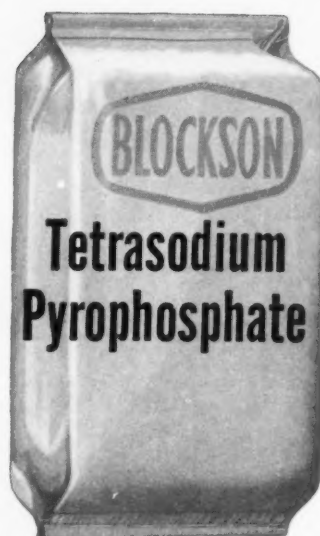
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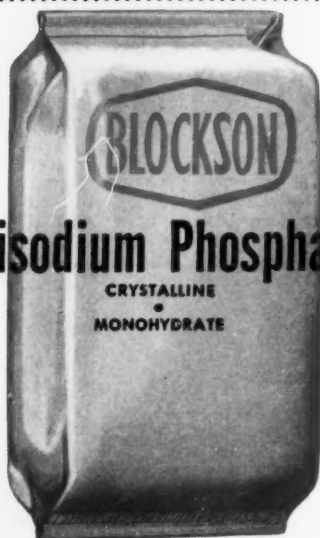
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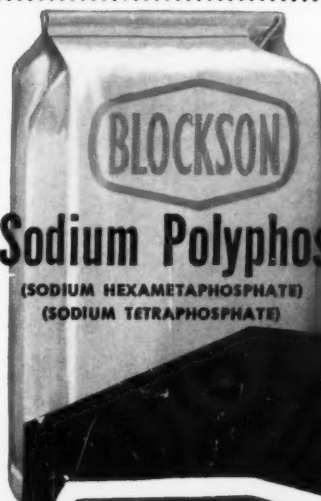
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Tripolyphosphate**



**Tetrasodium
Pyrophosphate**



Trisodium Phosphate
CRYSTALLINE
•
MONOHYDRATE



Sodium Polyphos
(SODIUM HEXAMETAPHOSPHATE)
(SODIUM TETRAPHOSPHATE)

Sodium Polyphos is Blockson's brand name for a water soluble Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetraphosphate.

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SODIUM ACID PYROPHOSPHATE

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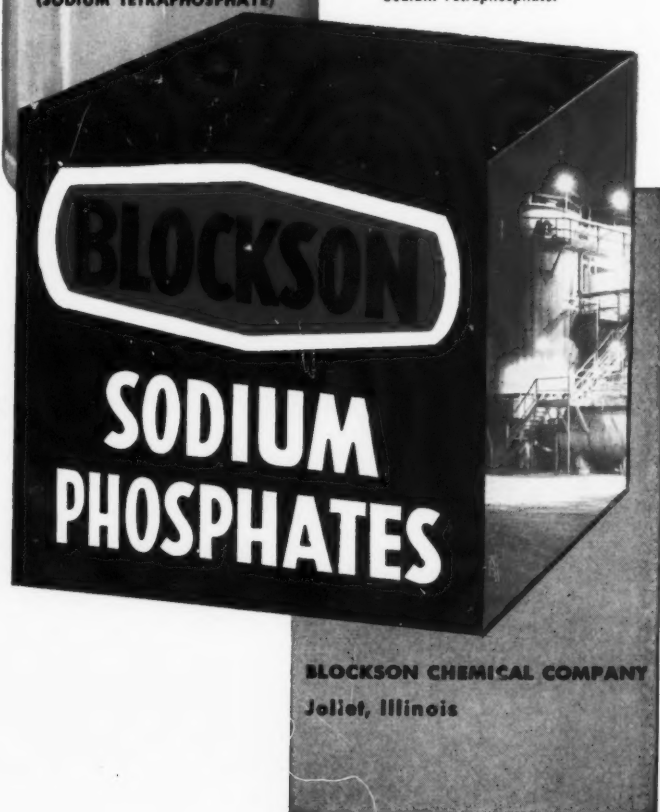
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SODIUM FLUORIDE

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HYGRADE FERTILIZER



BLOCKSON CHEMICAL COMPANY
Joliet, Illinois

FEDERAL Super Lightning Lustre

SUPER HEAVY DUTY WAX

AND SPECIAL HEAVY DUTY WAX

EXTRA WAX—means a bonus of real Carnauba Wax—the only ingredient that makes self-polishing wax wear better—polish better—look better than anything else can!

What Can **EXTRA WAX** Do For You?

These floors waxed twice a year. Only a heavy duty wax made from Carnauba Wax can take the punishment of scuffling feet and come up (looking good) day after day. Mop and polish time after time.

- Water Resistant
- Built-in Gloss
- More Buffability
- Carnauba Wax
- No Synthetic Wax
- Light Color
- Slip Resistant



Is Safety the Important Feature of the Wax You Sell?

SPECIAL HEAVY DUTY WAX is extra slip-resistant for hazardous floors and they will look better longer. Contains **LUDOX*** developed especially to take the slip out of floors that may be hazardous for general traffic. **SPECIAL HEAVY DUTY WAX** is formulated to do the best job with **LUDOX**—more wear—less slip.

EXTRA WAX Economy—Covers up to 2,000 square feet per gallon, it will cost about one cent to wax one square yard of most floors with Super Heavy Duty Wax



YOUR GUIDE TO BETTER FLOOR MAINTENANCE			Type of Floor	General Wax Maintenance	Hazardous by Special Conditions
Type of Floor	General Wax Maintenance	Hazardous by Special Conditions	Rubber	Super Heavy Duty	Super Heavy Duty
Asphalt	Super Heavy Duty	Special Heavy Duty	Wood	Super Heavy Duty Wax if sealed	Special Heavy Duty if sealed
Vinyl	Super Heavy Duty	Super Heavy Duty	Concrete	Super Heavy Duty Wax after sealing floor	Special Heavy Duty if sealed
Linoleum	Super Heavy Duty	Super Heavy Duty	Terrazzo and Hard Tile	Dilute Super Heavy Duty Wax with water (*)	Special Heavy Duty

(*) $\frac{1}{4}$ of wax to 1 gallon of water. Mop floor after cleaned and rinsed.

* Trade Mark of E. I. Du Pont de Nemours & Co., Inc., Reg. U. S. Pat. Off.

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PEER

#100
DISPENSER!



Unmatched in quality, performance and appearance, the PEER No. 100 Dispenser is your positive assurance of a steady flow of soap sales.

GOOD LOOKING . . . SANITARY . . . NON-CLOGGING . . . this clean lavatory accessory actually invites frequent use. Triple-plated bracket of copper, nickel and chrome and brass valve parts with nickel and chrome plating resist wear and corrosion. Graceful 12

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Imitated but unequalled from any standpoint of looks, quality and performance, the PEER No. 100 Dispenser is your best assurance of repeat soap business because

"THE USERS LIKE THE WAY IT WORKS." Prompt deliveries. Send today for catalog sheet and samples for inspection.

SEND TODAY FOR
CATALOG SHEET!

MOORE BROTHERS COMPANY

101 WARREN STREET



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Quality-proven Soap Dispensers & Dispensing Equipment

*for extra sales appeal in your
liquid soaps and shampoos*

New
Nacconol* 60 S.

Full body . . . light clear color . . . fresh clean smell . . .
these sales-stimulating properties of new Nacconol 60 S
commend its use in fine liquid soaps and shampoos.
Another valuable feature is its very low haze point . . .
no cloudiness at temperatures down to freezing!

Being a liquid, Nacconol 60 S saves money on your
production line too. No dissolving required, no stabilizer
need be added. On every score, you'll find new
Nacconol 60 S an excellent money value . . . a product
on which you can build excellent, profitable sales.

send for your sample now

See for yourself how good Nacconol 60 S really is.
Compare it for performance, appearance and price. To get
your free sample, use the handy coupon at the right.

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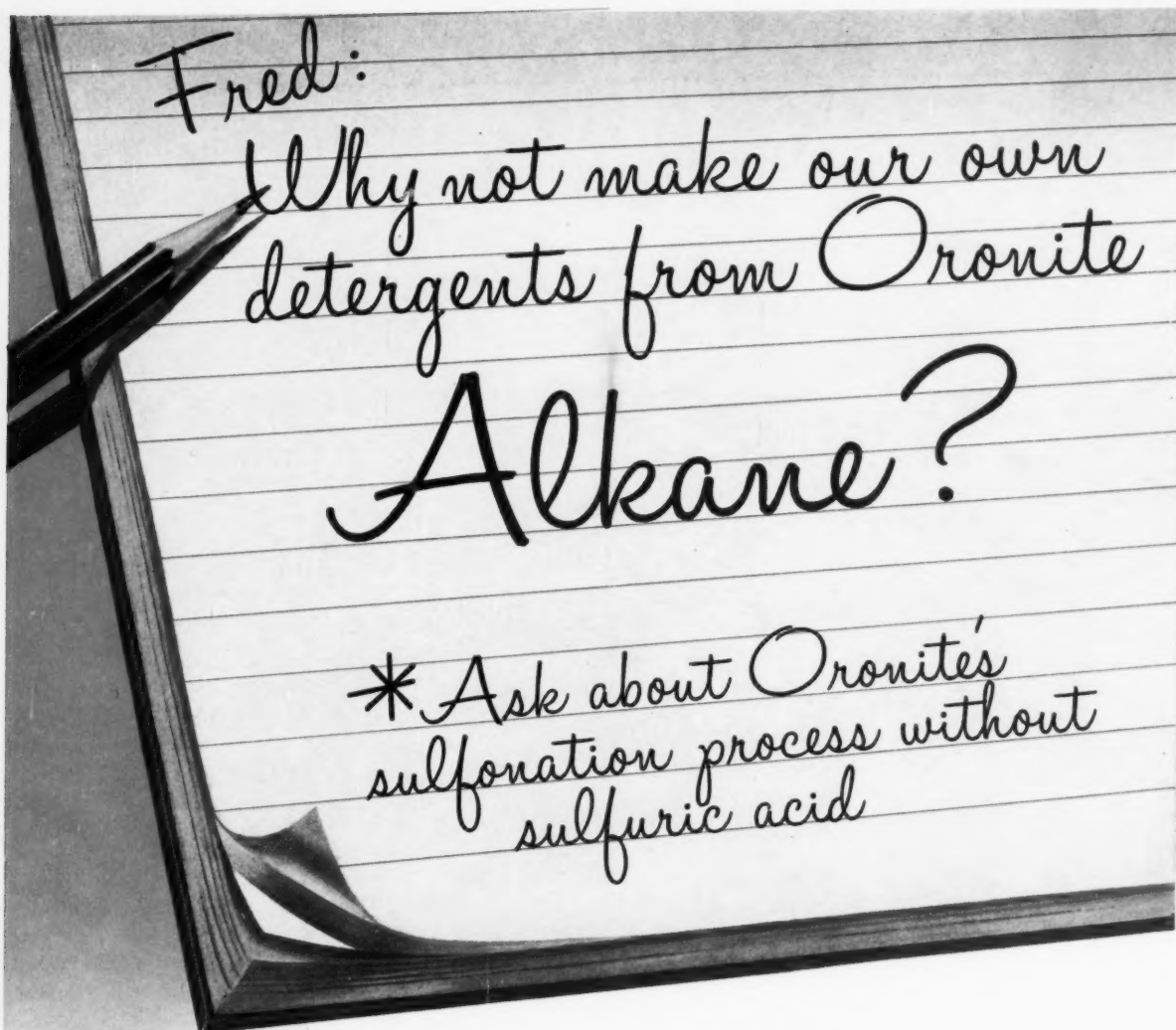


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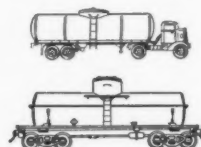


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After Closing...

Heads Swift Soap Dept

G. H. Hallenbeck has been appointed head of the soap department of Swift & Co., Chicago, according to a recent announcement by E. A. Moss, vice-president. He succeeds M. L. Westering, who has been manager of the department for the past 14 years. Mr. Westering has been assigned to specialized duties in the office of Swift's executive vice-president, O. S. Jones. Mr. Hallenbeck joined Swift & Co. in 1933. Mr. Westering has been with Swift for 32 years. (Complete details will appear in the next issue of SOAP.)

Vick Buys Hess & Clark

Vick Chemical Co., New York, recently announced an agreement to acquire Dr. Hess & Clark, Inc., Ashland, O., makers of insecticides, feed supplements and pharmaceuticals for the poultry and animal feed industry. The acquisition was to become effective Jan. 21. The purchase price was not disclosed. Dr. Hess & Clark was founded in 1893. Hermon A. High, vice-president and director of Vick, becomes president and general manager of Dr. Hess & Clark.

EOA Reelects Officers

Louis Gampert, Felton Chemical Co., Brooklyn, N. Y., was reelected president of the Essential Oil Association of the group's annual meeting held at the Savoy Plaza Hotel, New York, on Jan. 8. Other reelected officers are P. J. Coutin, P. J. Coutin, P. Chaley, Inc., New York, vice president; and F. Dittrich, Ungerer & Co., New York, secretary-treasurer. Reelected members of the executive committee include: R. A. Engel, Tubek Laboratories, Inc., East Rutherford, N. J.; George A. McGlynn, Magnus, Mabee & Rey-

nard, Inc.; H. P. Wesemann, Fritzsche Brothers, Inc.; and Waldo Reis, Van Amerigen-Haebler, Inc., all of New York. A. L. Fiore of Givaudan-Delawanna, Inc., was elected to his first term on the executive committee.

Reviewing conditions in the essential oil trade during 1954, Mr. Gampert reported an upward trend and a closing of the year on a strong note.

George Fuld Engaged

George Fuld, son of Melvin Fuld, president of Fuld Brothers, Inc., Baltimore, recently announced his engagement to Phyllis Cole of Baltimore. Mr. Fuld's father is also president of the Chemical Specialties Manufacturers Association. At present, George Fuld is teaching and working toward his doctor of philosophy degree at Massachusetts Institute of Technology. Miss Cole attended Wellesly College and will be graduated from Goucher College, Baltimore, in June, when the wedding is planned.

Magee Forms Own Firm

Marshall L. Magee for many years connected with T. F. Washburn Co., Chicago, manufacturers of floor maintenance products, announced early in January the formation of his own company, Magee Chemical Co. Mr. Magee resigned as vice-president and general manager of Washburn effective January 1. He has been identified with the sanitary supply industry for many years and was the first president of the National Sanitary Supply Association chosen from the manufacturers group. He served as president for a period of three years during World War II.

The new company will supply a full line of floor finishing materials including waxes, gym fin-

ishes, sealers, and cleaners. A joint announcement by Mr. Magee and Alfred P. Stresen-Reuter indicated that the new company will be associated with Frederick A. Stresen-Reuter Co., Chicago, manufacturers of protective coatings since 1911. The Stresen-Reuter company has manufacturing and office facilities at 2113 Medill Avenue, Chicago. A good portion of the Stresen-Reuter production is located in a new, modern plant in Bensenville, Ill., a Chicago suburb. The office of Magee Chemical will be located at this latter plant, 325 West Main Street, Bensenville. A new building is planned for the summer of 1955 that will add 25,000 square feet to the present manufacturing facilities.

Lever Glycerine Sales Head

The appointment of Laurel G. Parkinson as glycerine sales manager for the industrial division of Lever Brothers Co., New York, was announced Jan. 10, by William H. Cochrane, general manager of the division. Mr. Parkinson replaces C. Clyde Oliver, who retired after 30 years with the company.

Mr. Parkinson was formerly assistant glycerine sales manager. In his new position he is responsible for the sale of glycerine and fatty acids throughout the U. S.

A graduate of Kent University, Mr. Parkinson did post-graduate work at Ohio State and Temple Universities. He joined Lever about two years ago, after having been with Atlas Powder Co., Wilmington, Del. for several years.

A. G. Bowers Honored

A. G. Bowers, president of Gerson-Stewart Corp., Cleveland, was honored recently by the Chemical Society of Cleveland for "his outstanding contributions to the enhancement and interpretation of the chemical profession in the Cleveland area." A presentation to Mr. Bowers was made by Dr. Carl F. Prutton, vice-president of Food Machinery & Chemical Corp., New York, and formerly head of the chemical engineering department of Case Institute of Technology.

NSSA Meeting Plans

The emphasis will be on sales and merchandising during the 32nd annual convention of the National Sanitary Supply Association, to be held in Atlantic City, N. J., Sunday through Wednesday, Mar. 20-23, Leo J. Kelly, executive vice-president of NSSA, announced recently. The annual convention combines a trade show of all types of sanitary and maintenance chemical supplies and equipment. The trade show will be held at the Municipal Auditorium. Headquarters hotel for the convention will be the Traymore.

Mr. Kelly visited New York in mid-January to discuss special features and plans for the convention, which will be the first to be held in the east in many years. Assisting Mr. Kelly will be his son, Bernard T. Kelly, who is assistant executive secretary of NSSA.

A slightly modified plan for the convention and hours during which the trade show will be open is under consideration by the association, Mr. Kelly revealed. Normally the exhibit hall remains closed for that part of the business session of the convention on the second afternoon and the entire third afternoon. A possible revised plan for trade show hours would call for the convention sessions to be held the mornings of the second and third days, followed by group luncheons and the reopening of the exhibit hall for the entire afternoons of those two days. The show is open from 10:00 a. m. to 7:00 p. m. the first day.

Van Ameringen Expands

Van Ameringen - Haebler, Inc., New York, recently added 30,000 square feet of floor space to its New York plant. The export department's facilities have been doubled. A new and larger aerosol testing laboratory has been provided for and the creative perfume laboratories have been considerably enlarged. Additional space has been made available for the soap and cosmetic testing laboratories and for compounding and production. Executive offices and the employees'

restaurant were also enlarged and all offices and laboratories are air conditioned. Charles P. Walker, executive vice president announced the changes and said that they were a result of the growing export and industrial activities of the firm.

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Reorganizes Naval Stores

The reorganization of the naval stores department of Hercules Powder Co., Wilmington, Del., to provide two assistant general man-



A. Langmeier



G. F. Hogg

agers and three new divisions and division managers, was announced recently by Paul Mayfield, department general manager.

Arthur Langmeier, assistant general manager of naval stores



R. T. Yates



H. Wendle

since 1952, is responsible for production and development. G. Fred Hogg, newly appointed assistant general manager, is to be responsible for sales under the reorganization plan.

D. H. Sheffield



R. A. George



The three new divisions and their managers named by Mr. Mayfield are: agricultural chemicals division, Richard T. Yates, manager; pine chemicals division, H. M. Wendle, manager; oxychemicals division, Donald H. Sheffield, manager.

At the same time it was announced that the positions of director of sales and assistant directors of sales in the naval stores department will be eliminated. Dr. R. A. George becomes director of development under the reorganization, reporting to Mr. Langmeier.

Hercules also announced that a new plant involving new fields in the chemical industry will be put into operation in January by the naval stores department when the Higgins plant at Gibbstown, N. J., begins the production of synthetic phenol and acetone.

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New "Perma Kleer" Data

A revised booklet containing new and additional information on "Perma Kleer 80" brand of sequestering agents is now available from Refined Products Corp., Lyndhurst, N. J. The publication deals with the following properties exhibited by "Perma Kleer": chelating power for ferric ion over the entire pH scale with special emphasis in the range seven to 11, where the product is said to be particularly effective; formation of ferric chelate in the seven to 11 pH range; additional chelating ability for calcium, magnesium, and other metallic ions; solubility in acid or alkaline media; and stability of the compound and its chelates.

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Marvinny Joins Arbitrators

John J. Marvinny, chief chemist of Frank B. Ross Co., Jersey City, N. J., was appointed to the national panel of arbitrators of the American Arbitration Association, it was announced last month. As a panel member he is now available for selection by parties submitting commercial disputes to arbitration.

Becco FMC Division

Buffalo Electro-Chemical Co., Buffalo, N. Y., subsidiary of Food Machinery and Chemical Corp., San Jose, Calif., is now merged with the parent corporation and operates as its Becco Chemical Division, it was announced recently by Ernest Hart, FMC executive vice-president in charge of chemical divisions.

S. C. Kelton Retires

The retirement of S. C. Kelton as secretary of Rohm & Haas Co., Philadelphia, was announced early this month by Otto Haas, president of the firm. Mr. Kelton joined the firm in 1916 after graduation from the Harvard University Law School and has served as secretary and director of the company since its incorporation in 1917. He has also handled sales, administrative and legal responsibilities. He will continue to serve as a director of the company.

F. J. Rarig has been elected acting secretary. He is a 1936 graduate of the University of Minnesota and subsequently received an L.L.B. degree from Cornell University. He joined Rohm & Haas in 1946.

Gowans Crown Cork Pres.

Russell Gowans, former vice president and director of Crown Cork & Seal Co., Baltimore, has been elected president. He succeeds John J. Nagle, previously president and chairman of the board. Mr. Nagle will continue in the active management of the company as chairman of the board.

At the same time, Charles E. McManus, Jr., vice president, was elected vice chairman of the board.

In 1931 Mr. McGowans joined Western Stopper Co., San Francisco, which was acquired by Crown in the same year. In 1936 he was elected president of that subsidiary and continued to serve in that capacity when the unit's name was changed to Western Crown Cork & Seal Corp. When this corporation became a division of Crown Cork & Seal Co. on Dec. 31,

1953, Mr. Gowans was elected vice president of the parent company and general manager of the division.

Detergent Aerosol

Powr-Pak, Inc., Bridgeport, Conn., early this month announced a new synthetic detergent aerosol shampoo for private label packaging. A detergent formulation, the product is said to have produced no signs of corrosion or breakdown of material or containers after a year and a half in standard low-pressure aerosol cans. Non-irritating to skin and eyes, the shampoo contains a germicide and bactericide to combat dandruff and allied disorders. The product is available with or without lanolin. Shampoo patents have been applied for.

Moth Product Displays

Counter display shippers for four of its para and naphthalene type moth control products was announced recently by Click Chemical Corp., Mount Vernon, N. Y. Colorful shipping containers that open up into counter and other type displays are now available for Click's 10 ounce plastic bag of naphthalene moth balls, para closet hanger refills, 10 ounce bags of naphtha moth flakes and two ounce plastic para moth hangers. The display shippers are produced by Alpine Container Co., Paterson, N. J.

Hercules Tall Oil Plant

Hercules Powder Co., Wilmington, Del., will erect a tall oil processing plant on an 80-acre site in Southampton County, Va., in the vicinity of Franklin. The plant is expected to go into production in January 1956, will employ about 50 persons and will have a capacity of approximately 35,000 tons annually. Contracts have been negotiated by Hercules with kraft pulp mills in the area to supply the crude tall oil.

Hercules now operates 25 chemical plants in 14 states and overseas. The firm's sales amount to approximately \$200,000,000 a year.

PCO Conference Set

The National Pest Control Association recently announced dates and program outlines for three regional conferences. The Purdue Pest Control Operators Conference will be held at Purdue University, Lafayette, Ind., Jan. 31, through Feb. 4. Professor J. J. Davis is in charge of the program, which features as "Pest of the Year" invading insects. The course will be devoted to such problems as termite control, rodent control, control of general pest insects especially invaders, and sanitation. A special "Old Timers" program is exhibits will be provided at the Union Building. Commercial exhibits are welcome and can be shown and demonstrated free.

The fifteenth Southern Pest Control Operators Conference will be held at Louisiana State University, Baton Rouge, La., from Jan. 31 through Feb. 2. The event will be highlighted by the presence of Philip J. Spear, the new technical director of NPCA, who will discuss "Current Developments in Fly Control" and "Activities of the Technical Department of the NPCA." An innovation will be an extra lab session on the first day for 20 servicemen. Only the first 20 registered for the laboratory work will be accepted. Registration fee of five dollars must accompany each advance application. Subjects on the program include "PCO's Taxes," "Sales and Public Relationships," "Rats," and "Termites."

The University of Massachusetts, Amherst, Mass., will be host to the fifteenth Eastern Pest Control Operators Conference, Feb. 3 through 5. "Profits from Headaches" will be the feature replacing the "Pest of the Year" theme. Ellsworth Wheeler, University of Massachusetts; John B. Schmitt, Rutgers University, New Brunswick, N. J., and Neely Turner, Agricultural Experiment Station, New Haven, Conn., have cooperated to present a survey of the "Headache" pests. The conference will study the problem how to turn these "headaches" into profitable business.

Suggests Baits for Resistant Insects

PRACTICALLY complete control of insecticide resistant urban-type house flies and blowflies is possible by the use of baits incorporating organic phosphates, J. C. Keller of USDA, reported at the second annual meeting of the Entomological Society of America, held recently in Houston, Tex. Mr. Keller's report covered research accomplished in cooperation with H. G. Wilson and Carroll N. Smith, entomologists with the Agricultural Research Service of U.S.D.A. Insecticides used in the test baits included malathion and L 13/59, which had been found effective in earlier tests against resistant flies in dairy barns, and chlordion and an experimental phosphate, OS-2046, both new materials. All were greatly diluted in mixtures of molasses, malt, or sugar and water, which served as the fly attractants. Results depended upon the locality and the species of flies. At a rendering plant daily application of malt baits containing one percent OS-2046 was found to give best control of the predominantly blowfly population. On garbage and trash piles one percent chlordion in a malt bait was most effective against the blowflies. On city garbage dumps, both houseflies and blowflies were most effectively controlled with baits containing one percent OS-2046 or two percent malathion. Nearly as effective were 0.2 percent L 15/39 in a sugar-water solution and two percent malathion in blackstrap molasses.

Carroll N. Smith reported the discovery of 11 new mosquito repellents, all superior to currently marketed repellents. One compound, designated 20218, was found very repellent to the malaria mosquito, the yellow fever mosquito, two species of salt marsh mosquito, and the glades mosquito.

Chemically, 20218 is N,N-diethyl-m-toluamide, and like all other chemicals tested, was synthesized for these tests by USDA research chemists. Of 10 materials tested against the yellow fever mos-

quito, all but one proved superior to the standard, but none as effective as 20218. Against salt-marsh mosquitoes, six proved better than the standard, and one—propyl ester of mandelic acid—was on a par with 20218. Against glades mosquitoes, only 20218 was significantly superior to the standard, although four others were comparable. Two chemicals, 20218 and 1-(o-methoxyphenyl)-3-buten-1-ol were the equal of the standard against malaria mosquitoes.

To mark the centennial of professional entomology Roger C. Smith, retired Kansas entomologist, and P. J. Chapman, N. Y. Experiment Station, Geneva, N. Y., delivered talks on "Entomology and Its Accomplishments" and "Entomology and its Future," respectively.

American Dryer Contest

Sanitary supply dealers, distributors and salesmen and their wives who met minimum selling quotas in the "See You In Florida" contest of American Dryer Corp., Philadelphia, vacationed at the Mayflower Hotel, Palm Beach, Fla., Jan. 12-17. The 162 winners were American Dryer's guests, according to William F. Kane, president, who was host to the vacationers. In addition to the all-expenses-paid Florida vacation, a special incentive was offered to salesmen in the form of extra prizes for quantity selling of American electric hand dryers. Winners of these prizes, ranging from color television receivers to radio-phonographs, were announced during the Florida vacation.

Bobrick Check List

A tip sheet for use by sanitary supply salesmen to help improve washroom maintenance standards was announced recently by Bobrick Manufacturing Co., Los Angeles. The sheet, headed "Washroom Survey; Check List for Men's (or) Women's Washroom" lists down the left hand side various types of equipment, such as soap

dispensers, towel cabinets, deodorizers, sand urns, toilet tissue holders, etc. Along the top of the chart under the heading "recommendation" are seven headings, including "satisfactory," "more frequent cleaning," "repair or refinish," etc. There is space for each piece of equipment to be rated by checking under the suitable recommendation. The chart also carries two additional headings adjacent to those under recommendation. These are: "existing quantity" and "suggested quantity," which are to be filled in for each piece of equipment in the washroom. Copies are available free from Bobrick.

Monsanto Advances Mowry

Dr. David T. Mowry has been named manager of the fine chemicals section in the development department of the organic chemicals division of Monsanto Chemical Co., St. Louis, it was announced recently. Mr. Mowry succeeds R. S. Shumard who resigned from Monsanto, Jan. 1, to join Huron Milling Co., New York. Mr. Mowry has been with Monsanto since 1941, when he joined the firm as a research chemist. In October, 1952 he was transferred to the development department of the phosphate division, now the inorganic chemicals division, and was appointed manager of chemical development.

In January, 1954 he was transferred to the organic development department where he has been active in the company's petrochemicals program.

Crown to Build Plant

A new can manufacturing plant will be erected in Baltimore by Crown Cork & Seal Co., Baltimore, it was announced recently by John J. Nagle, chairman of the board. Plans call for the building of the 123,000 square foot, manufacturing, warehousing and divisional office building at O'Donnell and Newkirk Sts., adjacent to Crown's machinery division.

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
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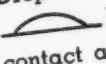
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—a drop of water is also shown.

Drops #1 and #2 retain their semi-globular shape—they show a high contact angle  between the drop and the test surface. The water and the anionic solution are unable to displace the oil film from the steel surface and therefore their cleaning power is limited.

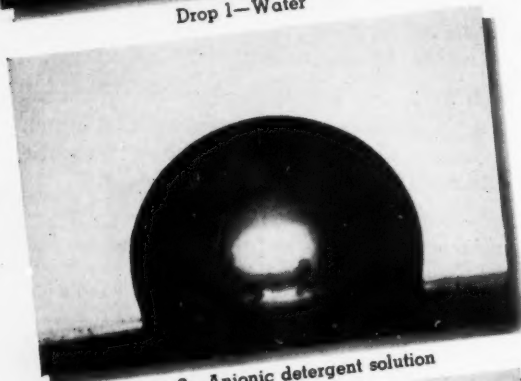
Drop #3 (TRITON X-100 solution) has flattened out . It hugs the surface and shows a low contact angle. It is able to wet the surface preferentially—it displaces the oil film from the surface and therefore, does a better cleaning job.

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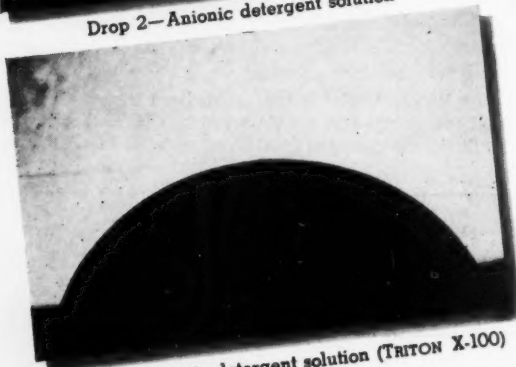
Further information on test procedures for laboratory evaluation of hard surface detergency is available upon request.



Drop 1—Water



Drop 2—Anionic detergent solution



Drop 3—Non-ionic detergent solution (TRITON X-100)

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FAC.....		7 Max.	7 Max.	21 Max.
Color (Lovibond 1 1/4" Col.).....	10 Y/1 R. Max.	30 Y/3 R. Max.	30 Y/3 R. Max.	
Color (Lovibond 5/4" Col.).....	98-102%	97-101%	97-101%	95% Min.
FFA (As Oleic).....	195-204	193-202	193-202	190 Min.
Acid No.....	90-96	88-95	88-93	83-90
Iodine No.....	198-204	194-204	194-204	193-203
Saponification No.....	1.0% Max.	3% Max.	2.5% Max.	3% Max.
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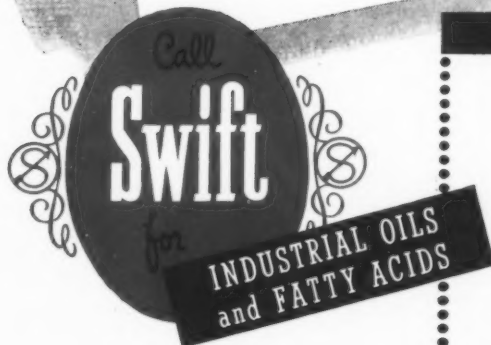
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
Cartoning Machines — Soap Presses

P. O. BOX 485


CINCINNATI, OHIO

... in brief

as the editor sees it . . .


 **STANDARDS . . .** The American Hotel Association is in the midst of revamping its purchasing methods which it recommends to its 6,000 member hotels. We understand that lists of approved products and product testing are to be scrapped and that end-use standards will be set up as a guide to hotel purchasing agents. If this be true, it should indeed be good news for suppliers of innumerable chemical maintenance materials, many of whom have refused flatly to apply for inclusion on any approved lists.

That hotel people, as well as many others who are faced with gigantic maintenance problems, are constantly on the search for new products and methods which will save time and money, is quite obvious. Labor is still 90 per cent of their maintenance cost. Therefore, better products, almost irrespective of cost, which can save high-wage labor today, are the ultimate aim. And only practical performance can determine this saving. All of which goes to prove that a known product reputation for doing a good job means more than all the approved lists in creation.

 **GLAD IT'S OVER . . .** With few exceptions, small soapers are not sorry to see 1954 behind them. On the whole, it meant steadily mounting expenses, increased costs in every direction and a paring down of profits in some cases to the vanishing point. To the old-fashioned soap maker who stuck with his soap products too long, the year of 1954 must have been completely frustrating. To those who added new things to their lines, there were some compensations, some new business to take the place of the old in the ever-changing soap-detergent picture. For the fellow who tried to

get along on government business, there were headaches aplenty and few, if any, profits.

The situation of the average small soaper requires no Solomon to diagnose it. The answer is the same as it has always been and always will be. He simply sells his stuff too cheaply. His thinking is so ingrained with the belief that he must take a nickel profit when he needs a dime to get by that there is little which can change him. He's dumb,—dumb as a coot. He lets supposed competition price his merchandise instead of his own calculations. He's scared to death to boost his price for fear his competitors will not boost theirs even though he knows he must have higher prices to exist. And so does his competitor. They're both lugs. And if they keep going at things during 1955 like they did in 1954, the year will be no better for them.

 **AEROSOL GAINS . . .** Big gains in the number and types of retail stores selling aerosol products have been recorded in the past two years. In some cases the percentage of retail outlets stocking one or more aerosol products is reaching the saturation point. Drug and variety stores are the leaders with an estimated 99 percent of both reported handling aerosols. Close behind are hardware stores with 97 percent. Department stores are coming up fast having gone from 65 to 88 percent reporting selling aerosols in the past two years. The figures cited above are contained in the Du Pont 1954 Dealer Survey of Aerosol Stocking. Continued growth in retail distribution of the aerosol products, first of which appeared on the consumer market only nine years ago, is a major factor in the success of pressurized products, according to the Du Pont study.

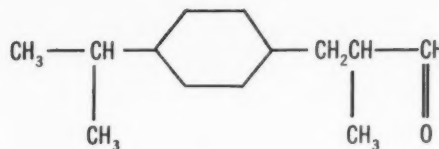
Although this year's survey reports on what

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Molecular
Weight :
190.27

Typical Specifications:

PHYSICAL APPEARANCE:	Nearly colorless liquid.
ASSAY:	93% minimum Aldehyde content.
ODOR TYPE:	Floral; Lily-of-the-Valley or Muguet.
SOLUBILITY (@ 20°C):	10 parts soluble in 15 parts 80% Ethyl Alcohol.
STABILITY:	Lasting in soaps, cosmetics and of a high quality which permits its use in the most expensive perfumes.
REFRACTIVE INDEX ($n_{\frac{20}{D}}$):	1.5055
SPECIFIC GRAVITY ($\frac{25}{25}$):	0.950
SUGGESTED USES:	As a base for Lily-of-the-Valley and Muguet perfumes to 5%; as a floral modifier from 1/4% to 5%.

Note these additional VERONA specialties:

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VERONOL • FLOWER OIL WHITE LILAC**

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
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dealers think of aerosols, rather than giving consumer sales, unofficial estimates place 1954 sales at around 200 million units, with a 25 percent increase anticipated for 1955. The astounding expansion of this phase of the chemical specialties industry naturally raises some questions. Number one, of course, is where is this thing going to end? The opinion that the one billion unit mark will be reached by 1960 is staggering, but one which the aerosol enthusiasts don't blink at. Could be they're right.


 OPEN SEASON . . . Haul down that old shootin' iron, Jeremiah, for the 1955 open season on legislation and regulation of industry is upon us! As we view the calendar, just about every state legislature in the country will convene this year,—and industry can pin back its ears and wait for the avalanche.

Now it seems that about every state has laws and regulations for insecticides, disinfectants, and the like. But there will be new ones. Don't worry about that. There will be changes, new label requirements, new regulations. Then, there will be added to the list of chemical specialty products now covered, new ones heretofore not regulated,—things like brake fluid and other automotive products. Then, there will be consideration given to the many hazardous chemicals sold for household and industrial uses. Country-wide newspaper publicity on child poisoning cases is almost certain to bring a flush of legislation in this direction.

In spite of the fact that industry believes that everything has been covered by law and regulation, it's due for a shock. Wait until the state legislatures start to pull the rabbits out of their hats. The open season is upon us once again!

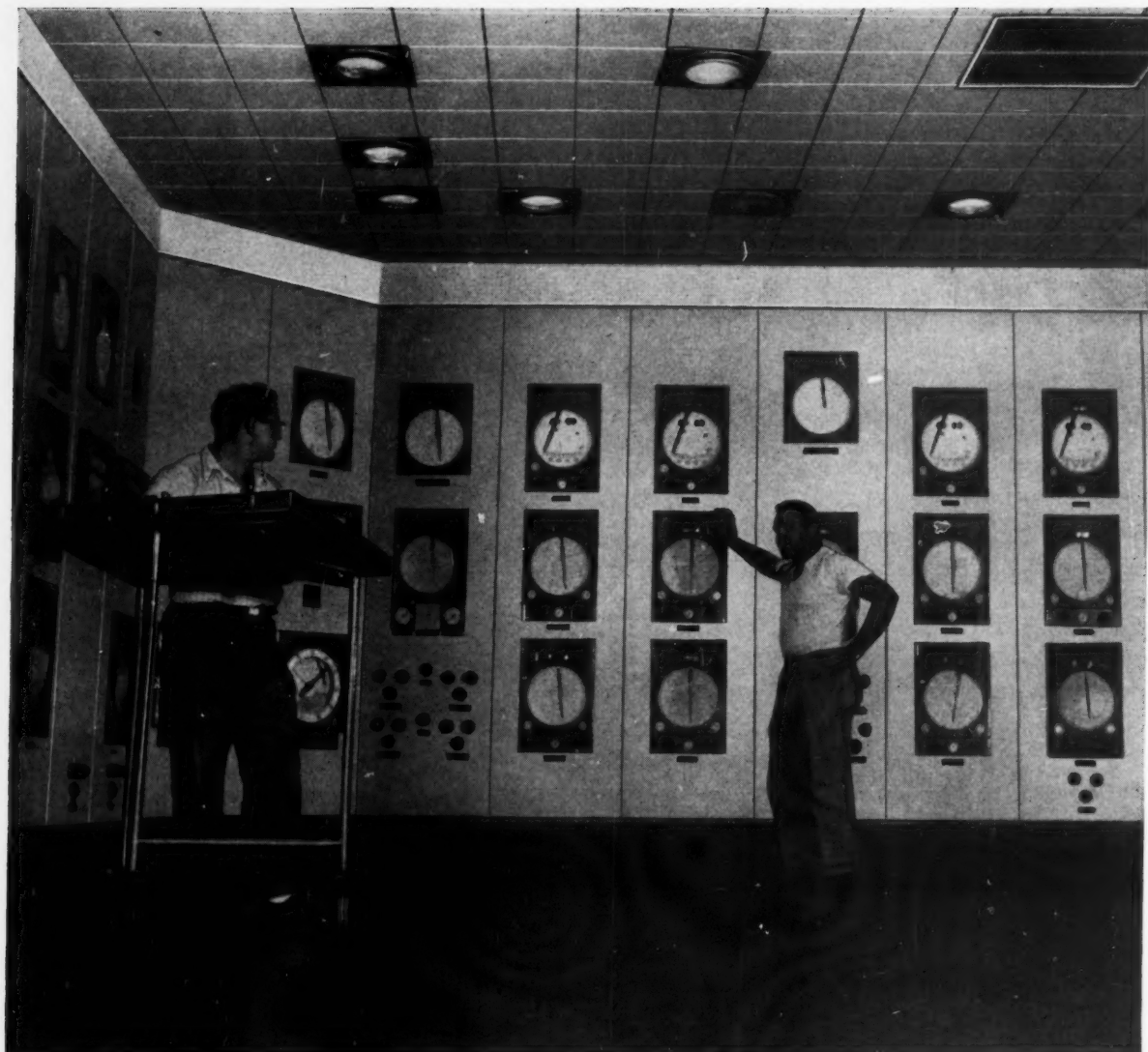
 INTERNATIONAL . . . That distributing of sanitary supplies in the United States has grown tremendously in the past decade is taken for granted by anyone even remotely connected with the business. And still the field continues to grow because of strong industrial activity and a high rate of construction of institutional, commercial and professional buildings. Alert merchandising has capitalized on this situation.

There is nothing in Europe like the sanitary supply industry as we know it in America. Members of the industry recently returned from Europe are struck by the absence of anything resembling our sanitary supply distribution system, as well as the general lack of sanitation. However, both in Europe and in other parts of the world the successful sanitary supply operations in this country are attracting the interest of business people abroad. Perhaps the ice is beginning to be cracked and who knows, we may even have an International Sanitary Supply Association to help the industry grow throughout the world.

 NEW THINGS . . . "For fifteen years now, business has either been artificially stimulated by demands of war or, conversely, artificially depressed by its aftermath. Today, neither is the case, and . . . we are going to have a chance to see what industry can do when it is not under the influence of stimulants or sedatives." These were the words of Leland I. Doan, president of Dow Chemical in a 1954 year-end statement. Going further, Mr. Doan stated: "Business should be pretty good, almost automatically, but if we want it to be excellent, we are going to have to create new markets by creating new and better products and services."

Even though the demands of war and the depression of its aftermath may have affected chemical specialty products less than some other industries, there are signs that these influences might now be making themselves felt to a greater degree. At the same time, there are still those who cry salt tears if business does not keep on going up, up, up. So some reports of a drop-off must be discounted. Most everybody tends to compare current trade with their previous top year.

Nevertheless, new things apparently are the answer to the marketer's prayer. Anywhere from fifty to eighty per cent of current sales of a half dozen leading merchandisers in and around the chemical specialty and detergent fields are of products which were not even on the market ten years ago. It seems that if you want business to be "excellent," it's almost a continual replacement of the old with the new.



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5 chlorine plants, 3 ammonia plants . . . as well as practical technical assistance with chemical handling and application problems.

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ETHYLENE OXIDE • ETHYLENE GLYCOL • DIETHYLENE GLYCOL • TRIETHYLENE GLYCOL • POLYGLYCOLS • DICHLOROETHYLENE • ETHYLENE DICHLORIDE • METHANOL • SODIUM METHYLATE • ETHYLENE DIAMINE

2762

as the reader sees it...

Carnauba Wax Spec.

Editor:

Of course, the T.G.A. is classified in some people's book as "Nobody," so you were right when you said nobody has written a standard on carnauba wax (in editorial in December *Soap*). We are not George and we are not as smart as the A.S.T.M., but we did have the guts to get out a standard and I enclose copy for your approval or disapproval, as the case may be.

From the latter part of your editorial, I gather you think you could write a real hot one yourself. When you do, please send us a copy.

S. L. Mayham,
Executive Vice-pres.
Toilet Goods Assn.
New York

* * * *

While we were thinking primarily of the floor wax and polishes industry when we wrote editorially in our December issue that: "nobody wants to write" (we didn't say "nobody has written") a standard for carnauba wax, we still stand on that statement. Nobody does want to write a standard for carnauba and other vegetable waxes in the large wax consuming floor preparations industry. Anyone who believes differently just hasn't been around the wax producing or consuming group in the last few years. Ed.

— * —

Bulk Package Trend

Editor:

Your (November) cover showing the "ALL" bucket certainly caught my eye, as did the comment on "trend to larger . . . packages." You also mentioned this in your editorial comments.

You see, exactly one year ago I, too, thought that there would be a trend to bulk packages—25, 50 and 100 pound sizes, and started this company. (Incidentally, that is when I first subscribed to your magazine.) I gave free delivery to my customers.

In a few months, I was selling about a truckload a month,—in a one-man operation,—selling mostly

"ALL" detergent. This certainly wasn't enough, but I felt, once the trend continued, and other soap manufacturers got into the bulk packages, and promoted it, I would be able to do enough volume to support my business.

Unfortunately, Monsanto, as of November 1st, 1954, finally decided to cut out the profit margin in bulk sizes and merchandise them through super markets.

As you mention, 25 pounds is pretty tough to carry, so the 50 and 100 pound kegs are practically off the market without delivery. Super markets do not deliver and any company like my own could not deliver at these increased costs.

To continue this "trend," we are talking about, the soap manufacturers must feel certain that they will not lose their biggest customers,—A & P, etc., who won't stand for different costs to different outlets.

Could it be that the first company which does not buck this "trend" will wind up with the "bulk" of the business?

I'd be very happy to hear any further comments from you.

James L. Steinig
Joseph A. James Co.
Philadelphia

— * —

Detergents for Bloat

Editor:

A copy of a short article in your paper (October 54, pg. 97) concerning "Detergents for Bloat" has been forwarded to me and I have read it with considerable interest. Nearly two years ago we found that "Dreft" would not produce the desirable changes in paunch liquor which we were seeking and reported this fact at the National Conference on Bloat in Chicago a year ago. We know of others that may not be suitable also. Of all detergents, I wonder why this one

was chosen and reported singly without comparison with others which do produce the desired changes. I believe in a positive approach to problems of this kind by trying to locate those that look promising instead of wasting time on those that do not because I am strongly convinced that in the end we will find a cheap and reliable product which will at least afford the livestockman a means of greatly reducing his expensive bloat losses. We have been and still are encouraged by many experiences that such is more of a probability than merely a possibility.

I merely wish to indicate to you what my general feelings are with regard to the application of this large group of substances to the solution of this disease. I am not trying to criticize Dreft or any other agent or any group working with these agents. I am merely interested that we examine the whole field before we cast aspersions on any part of it. Am I right or wrong?

Roy E. Nichols,
Professor of Veterinary
Medicine
Univ. of Wisconsin,
Madison

Right—Ed.

— * —

Women Salesmen

Editor:

I was present (at recent N.S.S.A. New York regional meeting) when the "startling" news was made that sales ladies were about to invade the sanitary chemical field. At the time, I regarded the statement as hog-wash type 2, and at the same time, I did not want to rebut the remark from the floor, inasmuch as I had a charming companion.

However, here is some news:

West Disinfecting Company's Washington, D. C. branch had Sara Roberts on the streets all through the thirties—doing an excellent job. Maybe she is still there.

When I was director of sales for Hollingshead's Industrial Di-

(Turn to Page 87)

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INTERMEDIATE FOR SYNTHETIC DETERGENTS

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Dishroom of a large hospital. Note electronic detergent dispensers on machines. Silver-dip operation in foreground.

Dishwasher Machine Detergents

IT is perhaps fair to state that, prior to 1934, mechanical dishwashing did not exist. True, machines were used for this purpose, but due to inherent deficiencies in the detergents available, mechanical dishwashing might well have been termed "mechanical dish-soiling." While the machine served to flush away gross food debris from the dishes, each time the dish was "washed" a layer of film consisting of insoluble calcium and magnesium soaps that entrapped grease, bacteria and other food residues along with insoluble inorganic soils was fixed upon the surface of the dish. This cumulative buildup of film soon reached a point where the ware was obviously dirty to the

By Kurt Albrecht*
Calgon, Inc.

eye and manual scouring or soaking the ware in strong hypochlorite solutions had to be resorted to. By this same mechanism, heavy deposits formed in the machine and had to be removed, generally with acid. This kind of mechanical dishwashing, part mechanical and part manual, was tolerable in commercial practice but placed the dishwasher in an unacceptable class as a household device. The housewife refused to use a device that required about as much effort as was needed to wash her dishes by hand. The appearance of the dishes was generally so far below her usual standard that they had to be handwashed every second or third time.

When R. E. Hall took Graham's salt or sodium hexametaphosphate down from the laboratory shelf where it had gathered dust for nearly a century (1,2), unnoticed by practitioners of the detergent art, new standards as to what was to be expected from a mechanical dishwashing operation were established. The inclusion of polyphosphates in detergents pioneered by Hall was a weapon that the detergent technologist could use to control calcium and other deposits and approach a purely mechanical dishwashing operation. The importance of Hall's contribution is best substantiated by the fact that all of the major producers of mechanical dishwashing detergents are now using polyphosphate, either glassy phosphate or crystalline tripolyphosphate, in their

*Paper presented before 41st annual meeting Chemical Specialties Manufacturers Assn., New York, Dec. 8, 1954.

formulations. For some fifteen years after Hall no radical changes in mechanical dishwashing detergent chemical technology occurred; most products in use were basically polyphosphate-alkali mixtures. A possible exception is Sanders and Yeager's report on a product that relies on a low-foaming surfactant combined with a minor amount of pyrophosphate as the active ingredient (3). Recent years have seen the introduction of an increasing number of products that contain sodium hydroxide as one of the alkaline components. Small amounts of surfactants have been added to some products, particularly those sold to the household trade, but the foaming properties of most surfactants seriously limit their utility in a spray type washing compound.

Problems Still Remain

THE polyphosphate-alkali mixtures were a tremendous step forward but they did not constitute a complete answer to all the problems of mechanical dishwashing. Major improvements were made in machine design but there still remains much to be done in this field. Automatic detergent feeders, most of them actuated by conductivity, have helped commercial dishwashing a great deal. The detergent was frequently blamed for a poor dishwashing job when it was not even in the wash water most of the time. The general adoption of preflushing equipment, either manual or mechanical, has contributed much toward reducing the soil loads in the dish-machine proper. However, two major complaints continued, so-called "water-spotting" and food stains particularly coffee and tea stains.

"Water-spotting," or the failure of rinse water to drain freely from a washed glass, has long been the primary complaint of the dishwasher owner. The addition of surfactants to the basic polyphosphate-alkali mixture has not, as yet, proved a satisfactory answer to this problem. Perhaps the closest thing to a real answer was a procedure suggested by G. H. Wotring of



FIGURE I

General Electric Co. He advocated the use of a liquid sodium hypochlorite bleach along with the detergent. In many cases improved results were obtained but, again, this did not seem to be the complete answer. Attempts to improve the standard detergents by adding substances such as calcium hypochlorite, sodium perborate, chloramine T, etc., did not prove fruitful. Finally it was discovered that the combination of sodium tripolyphosphate and chlorinated trisodium phosphate possessed some unique properties—proper compounding gave a stable, free-flowing mixture with remarkable detergency. Water-spots and food stains were no longer a problem.

Figure I is illustrative of the improvement that may be obtained. Glass A and B were washed five successive times in a household-type dishwasher under identical conditions. The water supply was Pittsburgh tap water with a hardness of 5.4 gpg as CaCO_3 . The soil used was the mixture of nonfat milk solids and oleomargarine developed by Hotpoint Research Laboratories. The detergent used on A was a standard polyphosphate-silicate mixture. The B detergent consisted essentially of chlorinated trisodium phosphate and sodium tripolyphosphate; it had an available chlorine content of approximately two percent. Glass A was heavily spotted after only five cycles while glass B remained essentially spot-free.

Additional advantages and uses for this new type detergent were rapidly found.

In the house the product soon proved itself to be wonderfully effective for washing melamine plastic ware mechanically. The product has merit as a mild bleach and detergent aid in the home laundry and may be used effectively for general cleaning. Superior sanitizing properties of the detergent made it ideal for use in biochemical laboratories. The fact that

Figure II

Direct Counts on Mechanically Washed Petrie Dishes

	Detergent	Number of dishes	Average count per dish	Highest count per dish	Lowest count per dish	Wash water count	Rinse water count
Micrococcus caseolyticus	A	12	2	5	0	0	2
	B	12	11	18	7	3	68
	Na_2CO_3	12	29	42	16	5	205
	H_2O	12	52	60	20	280	254
S. aureus	A	6	0	0	0	0	1
	B	6	24	36	5	780	15
	Na_2CO_3	6	190	360	3	1400	75
	H_2O	6	1400	2400	18	640	10

Figure III

Swab Rinse Counts on Melamine Plastic Ware

	Detergent	Number of pieces swabbed	Average count per piece	Highest count	Lowest count	Wash water average count	Rinse water average count
<i>Micrococcus caseolyticus</i>	A	12	1	2	0	1	9
	B	12	6	12	0	24	54
	Na ₂ CO ₃	12	24	80	3	36	24
	Water	6	132	270	90	82	9
<i>S. aureus</i>	A	12	2	6	0	0	0
	B	12	40	55	10	600	15
	Na ₂ CO ₃	12	120	240	2	1100	10
	Water	12	2750	4000	750	700	55

no surfactant had to be present made it particularly attractive to workers that had been plagued by interferences due to surfactants. While a number of considerations preclude advising that the use of the product eliminates the need for a sanitizing high-temperature rinse in commercial practice Figure II and III show the degree of insurance that is obtained by such a rinse.

The data in Figure II were obtained by the technique used by Hall and Schwartz (4); the procedure was modified slightly in that the normal cycle of a modern automatic home dishwasher was used (five minute wash, two one minute rinses), the soil was dried for only two hours, and *micrococcus caseolyticus*, a test organism used by Mallmann, Zaikowski and Kahler (5), was substituted for *B. prodigiosus* in part of the tests. Figure II shows the data obtained from a similar series when melamine plastic dishes were substituted for the glass Petri dishes. The plastic dishes used had been in service for over three years in an industrial cafeteria; the surfaces had obviously been subjected to scouring from time to time and were in a far from a new condition. Inasmuch as the residual organisms could not be readily cultured and counted directly on the dishes, a standard swab-rinse technique (6) was used. Detergent A is a chlori-

nated product; B is a standard polyphosphate-silicate mixture. It should be noted that these tests clearly showed that where a viable test organism in a natural food soil was used, there was no indication that a completely satisfactory degree of cleanliness cannot be obtained with plasticware if an adequate detergent is used. Field checks in commercial restaurants confirmed the laboratory tests. A typical study where five restaurants were spot-checked without warning gave an average count of 12 colonies per utensil; 10 pieces of ware were checked at each restaurant. The average final rinse temperature was 138° F.

The discussion thus far has been broadly on both commercial and household dishwashing. At this point I would like to subdivide the subject matter into the two fields and discuss first commercial uses of the chlorinated detergents.

(To be Concluded)

TGA Scientific Conference

The "Meterspray" method of dispensing cosmetic type aerosols and the acetylation of distilled monoglycerides were among the subjects covered at the meeting of the scientific section of the Toilet Goods Association held Dec. 8, at the Waldorf-Astoria Hotel, New York. H. R. Shepherd, vice president of

Connecticut Chemical Research Corp., Bridgeport, Conn., spoke on "Meterspray and Its Application in the Cosmetic and Pharmaceutical Fields." After referring to the commercial impact made by the aerosol method of dispensing in the household and toilet goods field, Mr. Shepherd said that many products in the cosmetic and pharmaceutical fields are of such nature as to require pre-determined dosages for proper functioning of the product. The aerosol metering device developed by Larry Wood provides the answer to this need, according to Mr. Shepherd. It is now in commercial use in perfume dispensing and will be applied more generally in cosmetics, pharmaceuticals, and foods. Part of the paper dealt with the mechanics of the metering device.

Acetylation of distilled monoglycerides is a continuation of the prevailing trend toward specialized modifications of natural fats and oils, according to Everett G. McDonough and Walter W. Edman, Evans Research and Development Corp., New York. They presented a study entitled "Acetylated Monoglycerides and Their Potential Use in Cosmetics." A preliminary investigation of two commercially available types, acetylated monoglyceride from lard (AML) and partially acetylated monoglyceride from hydrogenated lard (AMHL) indicated the presence of desirable properties suggesting potential use in shampoos, electric shaving lotions, and other cosmetic products.

New Florasynth Catalog

Florasynth Laboratories, Inc., New York, published a new edition of its catalog last month. It bears the sub-title: "Guide to a Better Beginning" and lists products, prices, and suggested uses. Copies are available to users of perfume compounds, aromatic chemicals, essential oils and flavorings by writing on company letterhead to any branch office in the U. S. or to any affiliate in Mexico, Canada or South America.

Pouchèr Odor Classification Revealed to Cosmetic Chemists

A NUMERICAL classification of odors first conceived in 1926 was revealed for the first time last month by William A. Pouchèr, Yardley of London, Ltd., London, England, in his medal award address before the Society of Cosmetic Chemists. Recipient of the group's 1954 gold medal, Mr. Pouchèr spoke at the dinner following the annual technical meeting held at the Biltmore Hotel, New York, Dec. 9. He stressed the importance of the system he has evolved by saying that he had felt it was too valuable for widespread diffusion in the later edition of his book. He was disclosing it now since the eve of his departure from the industry was approaching, he said.

In his paper entitled "A Classification of Odors and Its Uses" Mr. Pouchèr traced the attempts at odor classification by various authorities and described how he had arrived at a system based on comparative volatility. This he evolved by submitting essential oils and flower extracts to a laborious periodic estimation of their duration of evaporation by olfaction at a laboratory temperature of 16°C. Starting to work on this project in 1926 the author took four years to group the substances according to the length of time during which each exhales its characteristic odor. To the longest lasting fragrances such as patchouly and oakmoss he allocated the coefficient 100, to those that evaporated in less than one day the coefficient one, etc. Substances with coefficients of one to 14 are top notes, 15 to 60 middle notes, and 61 to 100 basic notes or fixers.

A complete list of classifications under this system will be published shortly with Mr. Pouchèr's paper.

After treating the question of fixation at some length, Mr. Pouchèr turned to the practical poten-



William A. Pouchèr, left, chief perfumer and technical advisor of Yardley of London, Ltd., accepts the Society of Cosmetic Chemists' annual medal award from Kenneth L. Russell, president of the society.

tialities of his system. It can be utilized in the duplication of already existing fragrances and in the developing of new flowery creations. A sample classification for the creation of a Lilac complex will appear with the paper.

The society installed its newly elected officers for 1955 at the luncheon Dec. 9. Kenneth L. Russell, Colgate-Palmolive Co., Jersey City, N. J., becomes president; George G. Kolar, Kolar Laboratories, Inc., Chicago, president elect; Walter A. Taylor, Ponds Extract Co., Clinton, Conn., treasurer. Ga-

briel Barnett, Warner-Hudnut Inc., New York, and Phyllis J. Carter, Atlas Powder Co., Wilmington, Del., were elected directors. Donald H. Powers, Warner-Hudnut, Inc., 1954 president, assumes chairmanship of the executive committee.

Two members of the Procter & Gamble Co. organization, Cincinnati, presented papers during the morning session, Dec. 9. C. C. Tillotson spoke on "Some Physical Chemical Properties of Stearic Acid." He stressed that commercial grade of stearic acid is not the pure product but a mixture of fatty acids containing a ratio of approximately 55 percent palmitic and 45 percent stearic. Usually small amounts of other fatty acids are present, frequently about four percent oleic and two percent myristic, exact amounts depending on the grade and manufacturing method. Commercial stearic acid generally is made from tallow or grease by pressing or solvent crystallization processes after fat-splitting and removal of the glycerine and impurities. Other ratios of fatty acids up to almost pure stearic can be obtained by a combination of hydrogenation and fractional distillation. Double or triple pressed commercial stearic are the preferred grades for cosmetics. The

(Turn to Page 102)

Principal speakers at the annual technical meeting of the Society of Cosmetic Chemists below are: seated, l. to r.: D. J. Birmingham, U. S. Public Health Service; Peter Flesch, University of Pennsylvania; H. B. Chase, Brown University; C. C. Tillotson, the Procter and Gamble Co. Standing, l. I. I. Lubowe, Skin and Cancer Unit, N.Y.U.-Bellevue Medical Center; E. S. Lutton, the Procter and Gamble Company; H. W. Zussman, Geigy Industrial Chemicals.





Jervis I. Babb
AASGP President



Roy W. Peet
AASGP Manager



C. D. Jackson
"The Way I See It"

Soap Industry Meeting Jan. 26-28

A PREVIEW of what's ahead for soaps and synthetic detergents both in the U. S. and abroad, as well as a review of what has taken place in the past 12 months will be presented in detail during the 28th annual meeting of the Association of American Soap & Glycerine Producers. The convention will be held Jan. 26-28, at the Waldorf-Astoria Hotel, New York. The broad outlines of the program for the three-day meeting call for an examination of the trends in the marketing of soaps and synthetic detergents, as well as the economic conditions that are likely to be experienced in the coming year and their effect on finished products, raw materials and by-products. Also slated for discussion is the launching of new products.

The meeting of the Fatty Acid Division of the association on Wednesday, Jan. 26, opens the three day annual convention. A business meeting and an explanation of "Cost Allocation and Control" by Winfield I. McNeil, New York management consultant, open the Fatty Acid Division meeting. Presiding at the morning session and the luncheon will be Fatty Acid Division chairman, Sewall D. Andrews, Jr., of General Mills, Inc., Minneapolis,

who will make the opening remarks. At the division's business session, committee reports will be read and divisional officers will be elected. They will be introduced at the Wednesday luncheon. Fatty acids application trends will be outlined in a panel type discussion Wednesday afternoon, Jan. 26. Speakers and their subjects include: Malcolm F. Graham of the standards division, research and development department, Colgate-Palmolive Co., Jersey City, speaking on "Toiletries;" Melville Ehrlich, research director of American Lubricants, Inc., discussing "Lubricating Grease;" and J. M. Wilkenson of the Central Research Laboratory of General Aniline & Film Corp., New York, covering "Vinyl Stearates and Related Polymers." Moderator for the panel will be Frank C. Haas of Archer-Daniels-Midland Co., Minneapolis.

The first day's activities will be concluded with a cocktail party and reception for which *Soap & Chemical Specialties* is host.

The second day of the meeting, Thursday, Jan. 27, opens with a morning session at which Jervis J. Babb of Lever Brothers Co., New York, gives his address and review as president of the Association of American Soap & Glycerine Pro-

ducers. Soap and detergent sales trends in 1954 are to be reported on by Philip Stomberg, vice-president of A. C. Nielsen Co., New York. The concluding feature of the morning's session is an "Analysis of the Economic Outlook for 1955" by Dr. Leo Wolman of the National Bureau of Economic Research, Inc., New York.

The Thursday luncheon session, presided over by C. L. Weirich of C. B. Dolge Co., Westport, Conn., will be highlighted by the presentation of the glycerine awards by H. C. Black of Swift & Co., Chicago, and an address on "Health and Sanitation Experiences in Foreign Lands" by Kaarlo Nasi of the U. S. Public Health Service.

Separate simultaneous meetings of the Glycerine and Specialty Soap Divisions will be held Thursday afternoon, Jan. 27. Glycerine resin research and glycerine promotion plans as well as a talk on "Changing Times for Glycerine" by A. Scott Pattison, manager of the Glycerine Division will be features of that session. Also speaking will be J. J. Craig of J. M. Basford Co., New York, on "A Review of Cell Preservation by Freezing in Glycerine" and R. O. Feuge of the Agricultural Research Service, U.S.

D.A., who will report on "Acetoglycerides and their Application."

The Specialty Soap Division meeting will hear two talks: "Advertising as a Tool for Specialty Selling," by John C. Clay of National Starch Products Co., New York, and "How to Get New Product Publicity" by Harry W. Smith of Harry W. Smith Co., Inc., New York.

There will be business meetings and election of officers at both divisional meetings.

The Washable Cotton Fashion Show introducing the "Maid of Cotton for 1955" at 4:00 p. m. and a cocktail party sponsored by *McCall's* magazine conclude the programmed events for the second day.

A convention breakfast, for which *True Story* magazine is host, opens the final morning of the meeting. The general session the morning of Jan. 28 features two panels, one on synthetic detergents, the other on new product selection, development and testing. James R. Macon of Atlantic Refining Co., Philadelphia, will discuss trends in synthetic detergents from a statistical point of view. He will be followed by Harold E. Bramston Cook of Oronite Chemical Co., New York, who will speak on "Current Developments and Applications of Non-Ionic Detergents."

The new products panel, for which Ernest Hart of Food Machinery and Chemical Corp., New York, is moderator, will be parti-



Leo Wolman
"1955 Economic Outlook"

cipated in by Dr. Nolan Sommer of American Cyanamid Co., New York, speaking on "Selection"; J. Kenneth Craver of Monsanto Chemical Co., St. Louis, whose topic is "Development," and Dr. Harry J. Wolf of Colgate-Palmolive Co., speaking on "Testing."

E. B. Osborn of Economics Laboratory, Inc., New York, presides at the Friday luncheon, for which C. D. Jackson, vice-president of Time, Inc., will be the guest speaker. Mr. Jackson's topic is, "The Way I See It."

The association annual business meeting immediately follows the luncheon. Reports of the manager, Roy W. Peet, and the treasurer, Nils S. Dahl of John T. Stanley Co., New York, as well as the report of the nominating committee, will be presented at the busi-

ness session. The election of the board of directors takes place also at this session.

The Industrial Soap Division meets Friday afternoon to hear a talk on selling by Jack Lacy of Lacy Sales Institute, Boston. This is followed by a business meeting and election of officers. Meanwhile, at 3:00 p. m. the board of directors meets and elects officers for 1955.

A reception from 6:30 to 7:30 p. m. sponsored by the association precedes the 28th annual banquet and floor show to be held in the grand ballroom Friday evening, January 28. Radio and television stars appearing on the five major radio-TV networks will entertain. The show this year is produced by Mutual Broadcasting System under the direction of Herbert Rice.

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RESA Branch for Lever

The Scientific Research Society of America has installed a new chapter, the Lever Research Center Branch, it was announced recently by Lever Brothers Co., New York. Installation of the forty-two charter RESA members and officers, all Lever employees, was conducted by Donald Prentice, national RESA director, at a ceremonial dinner, held in Teaneck, N. J. Officers of the new group are: J. David Justice, president; Leonard J. Vinson, vice president; M. D. Konort, treasurer; and Arno Cahn, secretary.

Winfield I. McNeill
"Cost Allocation . . ."

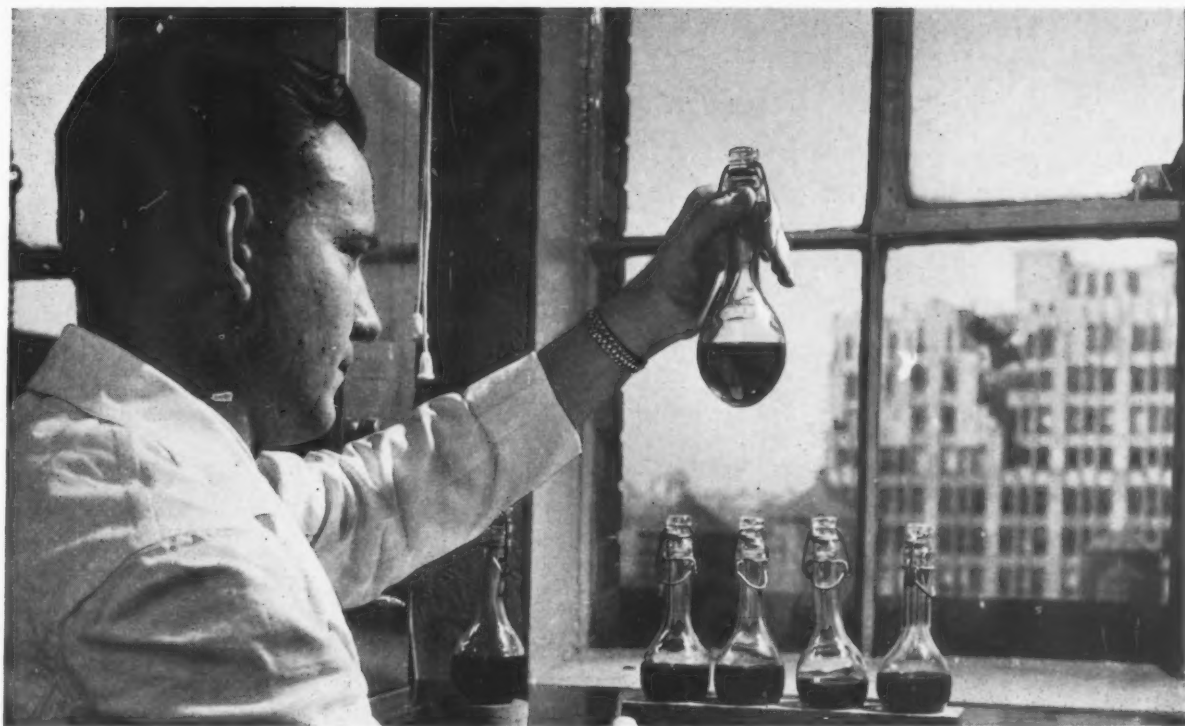


Philip Stomberg
"Soap Sales Statistics"



H. E. Bramston Cook
"Current Detergent Developments"





Perfume ingredients and propellant gas combined in pressure flasks are checked for solubility.

Perfuming Aerosols

WITHIN a space of eight years, sales of pressurized containers have increased more than 32 times! Production in 1947 was 5.5 million units. In 1954 it is estimated that output will reach 200-225 million, with even greater prospects for 1955. The reason for this vast and rapid growth can be stated very simply. Aerosols have achieved almost unprecedented consumer acceptance because of the convenience of the package. Products that are packaged today in aerosol containers include such diversified items as adhesives, insecticides, air fresheners, athlete's foot preventives, bactericides, burn preparations, artificial snow, cologne, fire extinguishers, flea killers, floor waxes, fungicides, furniture polish, gun oil, golf ball paint, hair dressings, hosiery run-preventives, moth proofers, paints, lacquers, enamels, personal

deodorants, rug cleaners, shampoos, shaving creams, spark plug coatings, spot and stain removers, sun-tan oils, topical anesthetics, upholstery cleaners, pearl spray, glue and waterproofing liquids. And every week brings its quota of new products to the aerosol medium.

Although not new . . . aerosols were first popularized during World War II with government development of the insecticide bombs . . . it is since that period that they have achieved such wide acceptance. Their ease of application lend an irresistible appeal in this "age of convenience items," where rapid transit vies with rapid shaves, and instant coffee and prepackaged mixes rule pantry and kitchen. The

term "aerosol" itself is owned by the U. S. Department of Agriculture and thus is open to use by any manufacturer. The fully developed aerosol insecticide bomb made it possible for our armed forces to live and campaign in the malaria-infested areas of both the Pacific and European war theaters; and in this initial work, Dodge & Olcott, Inc. played a primary role working in close conjunction with the Departments of Army and Navy.

Nature of the Aerosol

AN aerosol is defined as a suspension of fine solid or liquid particles in air or gas and includes all those products which depend upon the power of a compressed,

**A contribution of the aerosol laboratories
of Dodge & Olcott, Inc., New York**

liquefied gas to dispense them from their containers. There are three basic types, namely:

- (1) True aerosols, known as space sprays, good examples of which are insecticides and air deodorants.
- (2) Wet sprays or surface sprays, good examples being paints and waxes.
- (3) Foam products, such as shaving creams, hand lotions and shampoos.

As the principle of aerosol manufacture developed, both government and industrial laboratories devoted considerable time to investigating various liquefied gas constituents, and finally decided that the fluorinated hydrocarbon compounds best met all the necessary requirements as propellents. Non-inflammable, non-explosive, non-irritating, and non-toxic, fluorinated hydrocarbon propellents derive their power from the fact that they are compressed gases . . . yet are safe to use.

Aerosol Filling

AEROSOL loading must be done in either of two ways . . . pressurized equipment at room temperature, or with all the ingredients at sub-zero temperature, so that the propellant may be handled as a liquid. At room temperature, the fluorinated hydrocarbon compounds are gases, therefore, must be passed through a sub-zero unit. At this temperature, the vapor pressure of this material is very low and thus can be handled in the open like other liquids. When the propellant gas and the active ingredients are both cooled, they can then be loaded into the container and sealed on a rapid production line basis. As the sealed containers reach room temperature, the propellant builds up the pressure desired for dispensing the contents. With products which are sensitive to low temperatures, however, such as shaving creams, shampoos and hand lotions, pressure filling must be employed. The two principle manufacturers of fluorinated hydrocarbons today are: E. I. du Pont de Nemours & Co., Inc., Kinetic Chem-

icals Division, whose trade name is "Freon"; and General Chemical Co. Aerosol Research Division, whose trade name is "Genetrons." The chart on Page 41 is a brief chemical description of these products, both of which have been chosen because of their low toxicity.

Glass Aerosols

ONE of the newest entries in the aerosol field is the fast-growing glass container. Until very recently, all aerosol products had been marketed in metal containers prepared for two particular categories: (1) High pressure aerosols containing from 45 to 100 p.s.i.g. pressure, and (2) Low pressure aerosols with from 25 to 45 p.s.i.g. pressure. With the advent of the new glass containers it is possible to package with an ultra-low pressure of from 12 to 25 p.s.i.g. pressure. Available in two forms, the glass bottle with plastic coating, and the uncoated glass bottle, both have undergone rigid safety tests for low pressure aerosols and are now in use by many cosmetic, pharmaceutical and chemical specialties firms. There are many advantages to be gained by use of the glass aerosol, one of the most important being elimination of problems of contamination or decomposition due to corrosion. Many pharmaceutical and cosmetic products, which could not be converted to aerosols in metal containers, are now being packaged in one of the new glass forms providing greater sales appeal due to visibility of contents.

Safety Measures

WHILE the uncoated glass bottles will break if dropped, the low pressure of the propellant used (required by I.C.C. regulations to be below 25 pounds per square inch gauge at 70° Fahrenheit) prevents any hazard from such an incident. In the D & O aerosol testing laboratory, which has recently been expanded to accommodate new glass capping equipment and additional personnel, a number of tests have been made dropping the uncoated

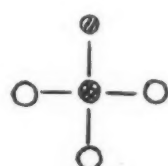
glass bottles. The only result has been a sound, like that of breaking a bottle of carbonated beverage. Similar tests made with the plastic coated bottles are even more effective. One such bottle was dropped 25 times from a height of four feet and did not break. The same bottle was then pitched against a steel safe from a distance of 15 feet. After the third pitch, it finally broke. However, the glass did not fly into the air but instead the fragments remained within the plastic coating which was still intact, while the gas itself escaped through small vent holes in the plastic. The new glass containers are available today in various shapes and colors, and any special design can be moulded up to four ounces at the present time. Plastic coated bottles can be had in either transparent, translucent or opaque plastic in a wide range of colors.

Perfuming Aerosols

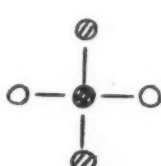
BOTH the comparative newness and rapidly expanding nature of the aerosol industry bring about many problems not experienced by the manufacturer when working with traditional packaging. This is particularly notable in the product development laboratories of the perfume supply house. Not only must the fragrance used be compatible with all other ingredients . . . a standard problem in all perfuming work . . . but, in addition, the solubility of oils often present difficulties when combined with the particular propellant that must be used. Perfume materials that have proved soluble and stable for many years in specific items . . . colognes, shampoos, shave creams, room deodorants, hand creams, etc. . . are found suddenly to cloud, clog, or separate when tested in one of the aerosol propellents. One of the first steps in the procedure of the aerosol testing laboratory is to test the solubility and general compatibility of perfume compound under consideration thoroughly in the propellant to be used. This is done by means of specially designed glass pressure

Fluorinated Hydrocarbons

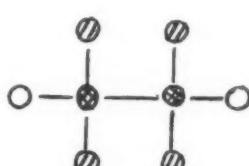
FREON	— 11	}	MONOFLUOROTRICHLOROMETHANE	CCL3F
GENETRON	— 11			
FREON	— 12	}	DICHLORODIFLUOROMETHANE	CCL2F2
GENETRON	— 12			
FREON	— 114	}	DICHLOROTETRAFLUOROETHANE	CCLF2 CCLF2
GENETRON	— 320			
<hr/>				
FREON	— 21	}	DICHLOROMONOFLUOROMETHANE	CHCL2F
GENETRON	— ..			
FREON	— 22	}	DIFLUOROMONOCHLOROMETHANE	CHCLF2
GENETRON	— 141			
FREON	— 113	}	TRIFLUOROTRICHLOROETHANE	CCL2F CCLF2
GENETRON—G	— 226			



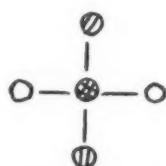
"FREON - 11"
"GENETRON - 11"



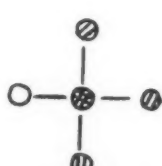
"FREON - 12"
"GENETRON - 12"



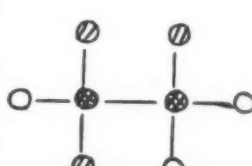
"FREON - 114"
"GENETRON - G 320"



"FREON - 21"



"FREON - 22"
"GENETRON - 141"



"FREON - 113"
"GENETRON - G 226"

KEY ● CARBON ⊙ FLUORINE ○ CHLORINE ⊕ HYDROGEN

flasks, each of which contains a compound and a gas combined and kept for varying periods under from 12 to 38 pounds of pressure, depending upon propellant used. Compounds not compatible with the propellant will separate, cloud or otherwise deteriorate. When this occurs, the formula must be broken down in order to determine which element is responsible for the difficulty. Still another problem, frequently encountered in the development of a new aerosol item, results from the tendency of certain perfume oils to cause corrosion of the container or clogging of the valve. Extensive testing is necessary to determine whether or not such disintegration

will occur . . . another important function of the aerosol testing laboratory. Basically, aerosols present to the perfumer, three specific problems: masking, perfuming and compatibility with the particular properties of the package.

Glass "A Natural"

GLASS aerosols are a "natural" package for fragrance products. Advantages of the glass package for fragrance are two-fold: a generally more attractive aerosol container appearance, and the elimination of the corrosion problem that is ever present when metal containers are used. The low pressure gases . . . "Freon 114" and "Genetron 320," the de-

velopment of which initially made possible the glass container . . . are doubly valuable because of their unusually fine stability. Not only will these propellents eliminate the problem of odor deterioration, but in many instances have been found to enhance a fragrance. In fact, a number of perfume odors that have never achieved popularity in extract or cologne form, take on a finer, more appealing quality in the glass aerosol package. Still another primary advantage lies in the air-tight properties of the bottle. Once sealed, no air can enter, thus the possibility of odor deterioration is eliminated and the fragrance remains completely stable down to the last "spray."

Aerosol Colognes

THE new glass package is particularly favorable to the development of fragrance products. During the past few months more than a dozen aerosol colognes have appeared on the market . . . with many more soon to follow. Merchandisers' reports show that the sales of aerosol colognes have been phenomenal . . . proving beyond doubt the enthusiastic public acceptance of the newest entry into the aerosol field.

Aerosol Testing Lab

DUE to the rapid expansion of aerosol packaging and the development of new types of aerosol preparations the recently established D & O aerosol testing laboratory has just been enlarged to accommodate both additional equipment and personnel. Each pressure packaged product requires individual attention, whether it involves adaptation of a product already established or the development of an entirely new idea. The D & O aerosol testing lab has, as its primary objective, the development of these new or converted products and subsequent testing of them for the manufacturers who plan to put them on the consumer market. Traditional formulations for perfumes, colognes, and other such items must be adapted

(Turn to Page 65)

Rating Detergent Performance

By Dr. Esther D. McCabe*

Colgate-Palmolive Co.

PART II

A TEST with a cylinder type automatic washer was made using a six pound normally soiled load. "Standard" soiled swatches were included, and the results, given as units of soil removed, are included in Tables VIII and XI. The linens used in these tests were supplied to a number of housewives and soiled during normal use. The linens were collected once a week and laundered in the laboratory under controlled conditions in a regular agitator type conventional washing machine. After washing and ironing, or drying, the linens were returned to the housewives for re-soiling and the cycle was repeated for six successive soilings and launderings. Linens used in the tests were measured for cleanness and whiteness at the beginning of the test, that is, before sending them out for the first soiling) and again at the completion of the test (after six soilings and washings). Detergents #1 and #2 were run at their recommended concentrations, #1 at 0.26 percent and #2 at 0.36 percent concentration. Conditions of the test were as follows:

Temperature —120°F.
Amount of water —7 gallons
Concentration of detergent —0.26 % (#1) and 0.36% (#2)
Load —6 pound normally soiled load plus 5 "standard" soil swatches

Results are shown in Table VIII.

This is the first time that fluorescent dye figures have been included. All the leading detergents contain fluorescent dyes. These dyes are called brighteners or "sunlight ingredients." In daylight, there is some ultraviolet light which the eye cannot see. The brightener, in effect a colorless dyestuff, dyes the fabric, and converts the ultraviolet light to visible light; the net result is that the fabric appears whiter or brighter than it would otherwise.

The effect of this dye is important from the housewife's point of view. She bases her evaluation of a detergent on how clean her finished laundry looks. And, the whiter or brighter it looks, the cleaner it appears to her.

When the linens washed in this test were evaluated visually by a panel of 10 observers, those washed in Detergent #1 were preferred for cleanness nine to one over those washed in Detergent #2. This preference was probably due to the brightener effect. However, when the standard soiled swatches were examined, the results did not agree with the visual evaluation.

*Before American Home Laundry Manufacturers Assn. Conference, New York City, Nov. 4, 1954.

TABLE IX

Standard Soil Swatches
Average Reflectometer Units Lighter than Original*

Detergent	Soft Water	Hard Water
1	6.6	5.8
2	5.8	5.4

*The higher the number, the cleaner the swatch appeared. However, because of the inherent error when soiled swatches are used in this test, differences of less than a unit are not considered significant. Using the same cylinder type washer, we set out to see how many yards of standard soil would have to be added to a clean load to break-down the suds the way a normally soiled load did. We again chose Detergent #1 because it seemed to be effected more readily by soil. We used 18 x 18 inch squares, and found that even though we added five square yards of soiled material we could not break the suds. It would appear that the amount of standard soil that is usually added to a clean load would have no effect on the amount of foam formed.

In order to have information on both types of washers, that is, on the agitator as well as the cylinder type, the final series of tests were done in an agitator type washing machine. Detergents A and B, that were mentioned in the first tests reported in this paper, were used in this series. Both clean load and soiled loads were used, and standard soil #1 was included in all tests. Conditions of these tests were as follows:

Temperature —120°F.
Amount of water —17 gallons

TABLE VIII
Average Family Linens
(6 soilings and washings)

Units Darker Than Original*				Fluorescence Intensity**			
Soft Water		Hard Water		Soft Water		Hard Water	
Detergent	Det.	Detergent	Det.	Detergent	Det.	Detergent	Det.
# 1	# 2	# 1	# 2	# 1	# 2	# 1	# 2
2.6	3.6	4.2	5.0	14.8	5.4	12.6	3.0

*This is a measure of cleanness. The higher the number the more soil remaining on the linens. Detergent #1 appears slightly better than Detergent #2.

**This is a measure of brightener action. The higher the value the greater the whitening action. Detergent #1 appears better than Detergent #2.

Concentration of detergent —0.20%
 Load —6 pound clean load or 6 pound normally soiled load plus standard soil swatches in both loads.
 Water hardness —50 PPM and 300 PPM as CaCO₃
 Number of washings —6

Again, the linens used in the soiled load tests were measured for cleanness and whiteness at the beginning of the test and again at the completion of the test.

Results are shown in Table X and show no significant difference between the two detergents. Both washed the clothes very clean. When these linens were evaluated visually, there was no difference between the loads washed in the two detergents. However, when standard soil swatches were used, the results did not agree with the visual evaluation, nor with the cleanness results on the family linens.

Differences between amount of soil removed by the two detergents when using artificially soiled fabrics are enough that Detergent B could be said to clean significantly better than Detergent A. Note that Detergent B did not remove as much soil in the soiled load as in the clean load. This agrees with results reported in Table V, although there was not enough soil present to make Detergent B appear poorer than Detergent A in removing soil from standard soil swatches in soft water.

As has been pointed out, the brightener has a great deal to do with the *total clean appearance* of the laundry. Visual evaluations are greatly influenced by the effect of the brightener. Standard soil does not show the effect of the brightener visually. However, in this test, the cleanness results as shown by reflectometer readings found when using a normally soiled family laun-

TABLE X Soiled Linen Load Average Family Linens							
Units Darker Than Original				Fluorescence Intensity			
Soft Water		Hard Water		Soft Water		Hard Water	
Detergent A	Det. B	Detergent A	Det. B	Detergent A	Det. B	Detergent A	Det. B
0.97	0.22	0.23	0.05	12.6	12.2	14.6	13.5

dry, namely, that Detergents A and B wash equally well, do not agree with results of the test when a standard soil was used.

I think you will agree that there is a good deal of confusion on how detergents should be evaluated. This confusion is due to the many different methods used to evaluate them. The results found by any researcher depend upon the conditions under which he performs his test.

This confusion does not mean that no one knows which are the good detergents. All the results are *right* as far as they go, even though the results obtained by one technician may be entirely different from those obtained by another.

No *single* test is wrong. It merely does not give the whole story. To really evaluate detergents a great variety of tests under many conditions must be made. The standard soil fabric test method is a good screening test, to weed out the poor detergents. But a single soiled fabric does not represent the multiple of soils met in practical washing. The suggestion has been made that a test be set up using a number of standard soils, each one made up to simulate one soil and one method of application of that soil on a family laundry. Thus, the light greasy soil normally found on a sheet would be rubbed in. Some of the food stains found on a tablecloth would be put on in a water

solution. The problem with this method is that any single family laundry has many different soils applied in many different ways. The use of dozens of different standard soils could become much more complicated than a practical laundry test.

To find out which is the best detergent of many good detergents available, the use of one or two standard soiled fabrics is apt to give erroneous or conflicting results when compared with those obtained by housewives. Care must be taken not to pass over a really good detergent because of the test method. As was shown in Tables VI and VII, Detergent #1 would be ruled out because of the amount of foam it produced if only clean loads containing standard soiled fabrics were used.

In order to get a complete story, practical laundry tests must be included. Only when you have run a great variety of tests, under many conditions, can you make a reliable conclusion as to what detergent is the best.

Looking into the future, we see detergent evaluation tests using radioactive soil and bacteria. Will guess work be completely eliminated by using a Geiger counter to trace the movement of tagged soil? Will the Geiger counter eventually disclose which soaps or detergents do the job they are claimed to do?

(Turn to Page 177)

TABLE XI Standard Soil Swatches Average Reflectometer Units Lighter than Original				
	Soft Water		Hard Water	
	Detergent A	Detergent B	Detergent A	Detergent B
Soiled Load	7.4	9.3	6.5	8.1
Clean Load	7.7	10.8	7.3	10.3



Cleaning the skin of an airliner is necessary to prevent corrosion which weakens this important surface.

Cleaners for Airliners

IN airline operation, cleaning methods and materials must be highly efficient for reasons of safety, as well as economy. We as Americans are constantly seeking new products and methods to increase the speed factor by reducing lay-up time for cleaning and overhaul. In this highly competitive business it is essential that aircraft be returned to pay load operation with a minimum of lost air hours.

Now let's get more specific about cleaning agents and specialty items we use. I have divided them into four groups:

1. Compounds used on the exteriors
2. Compounds used to clean interiors
3. Engine cleaning materials
4. Plant maintenance materials

*Based on a talk presented at the 41st annual meeting of Chemical Specialties Manufacturers Association Symposium, New York, Dec. 7, 1954.

By B. L. Southwick*

American Airlines, Inc.

In keeping the exteriors of our airplanes clean, we have two motives. The most obvious is that people not only like to ride in new looking cars, but also like to fly in new looking airplanes. To this motive, we must add the equally important phase of preventing corrosion to parts that have been designed to carry a certain load when all the metal is there—we cannot afford to find much of the metal missing either from the internal structures or the external skins.

The skin or covering, of an aircraft is the main source of strength of certain areas such as the wings. Corrosion, which eventually weakens these areas, must be kept to a minimum so the skin can carry its full load.

The exterior of the airplane

is made up mainly of several aluminum alloys interspersed with "Plexiglas" windows. I mention these windows because they are easily damaged by many cleaning agents. To replace the 39 "Plexiglas" windows of a single DC-7 costs about \$600. If a delayed action type cleaner did find its way onto every window of our entire fleet, before it was detected, many thousands of dollars would be spent for replacements. Furthermore, it has been found that while many cleaning agents remove the dirt from aluminum surfaces rapidly, they also remove the aluminum quickly. Since the DC-7 represents an investment of about \$1,700,000, we can well afford to maintain a staff of project and chemical engineers to test and evaluate the cleaners we use.

At every opportunity that a full flying schedule permits, our

planes are washed down with an emulsion type cleaner. This emulsion cleaner is diluted with a Varsol type petroleum solvent, which helps the cleaning action of the solvent, very much like soap helps in the cleaning action of water. The cleaner and solvent removes oil thrown by the engines, light exhaust stains, and loose soil films picked up while in flight. About every 20 days we go over the entire exterior with a light abrasive type cleaner that removes traffic film and some stains in addition to restoring the gloss of the aluminum. After the airplane has accumulated approximately 2000 hours, it is returned to our Overhaul Base in Tulsa for a complete inspection and overhaul, and during this period the entire exterior surface is polished, but with a more abrasive type cleaner. This removes the more stubborn traffic film plus oxidation and stains.

Exhaust gases from the engines flow over the exterior wing and engine nacelles, leaving deposits of carbon and lead oxide. Because of the exhaust arrangement, this problem is confined mainly to our DC-6 and 7 aircraft. It is necessary to use rather drastic measures to remove carbon and lead deposits and for this job we employ a water rinsable type paint stripper. The carbon deposit, which has a structure similar to that of diamonds, is not actually dissolved—only the binder is dissolved thus the deposit is released or lifted from the skin surface. It is necessary to remove these deposits since they are the most common cause of corrosion. In spite of our many precautions, we still encounter corrosion, which is eliminated with a phosphate material which removes the corrosion chemically without damage to the base metal. Before leaving this category of aircraft exteriors, I want to emphasize that corrosion is one of the airlines biggest problems and, as such, our company has made important contributions, not only to our own industry, but also to the airframe manufacturer.

From the public relations standpoint keeping the interior of the airplane clean and orderly is probably most important. Cleaning between flights is confined primarily to house cleaning techniques; such as picking up newspapers, cleaning ash trays, sweeping the carpets and arranging the seat belts. Periodically, all of the vinyl fabric surfaces are cleaned with mild detergent. The upholstered seat covers and carpets are designed so they may be completely removed from the airplane and sent to a dry cleaning establishment. It is interesting to note that due to the ability of our DC7's to fly above weather or "turbulence" we have experienced a welcome drop in the use of an eradicator for airsickness spots. We also owe the "Men of Medicine" a vote of thanks in this department for making such things as Dramamine available to us.

Engine Cleaning

NOW we come to another separate problem of cleaning that is very necessary to the operation of an airplane. But here the public really never sees what we have done. The engines that pull our DC-7's through the air serve us faithfully for about 1000 hours of flying. At the end of this period, the Civil Aeronautics Administration deems it necessary to remove the engines from the plane, tear it down to the last nut and bolt, inspect it minutely, and then rebuild it so it is essentially a new engine. These operations are performed by a separate part of the Overhaul Base that is a factory in itself. After the engine package is removed from the airplane, the accessories that make it operate and supply power to operate other systems are removed and sent to their own specialized shops for overhaul. The bare engine is then placed in the "tear down" line where it is disassembled. The parts are placed on a conveyor which transports them through an automatic cleaning machine. The parts are first sprayed with a hot alkaline solution that removes all of the loose oil; they

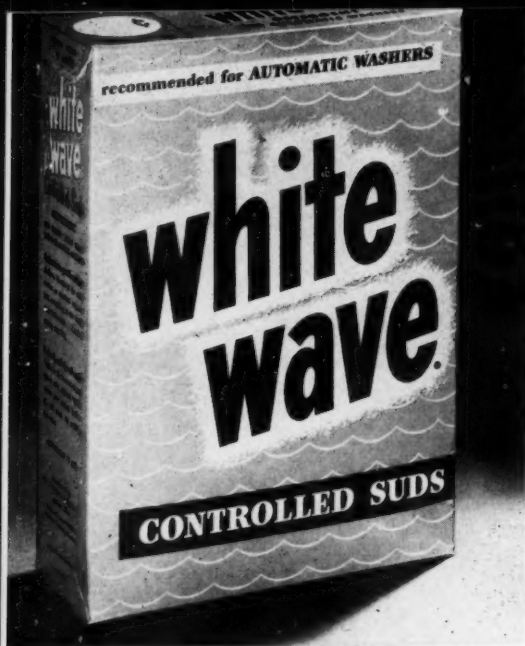
are then immersed in a carbon removing solution which loosens the carbon and sludge deposits. After passing through the soaking solution they are again sprayed with a hot alkaline material that removes the loosened carbon and sludge. The parts are then removed from the conveyor and given a final touch up by hand. The above description makes the cleaning operation sound simple, however, the solutions must be capable of removing carbon deposits that are much more difficult to remove than those that develop in automobile engines. They must also remove a type of lead sludge that seems to be peculiar to engines burning high octane aviation fuel. It must do all this and still not be corrosive to aluminum and magnesium alloys as well as steel alloys.

Other parts of the engine package such as the mounts and other steel parts that accumulate burned-on oil, are placed in a strong caustic solution that is heated to near the boiling point of water. Vapor degreasing is used for specialized cleaning jobs such as removing the protective coating of replacement parts and the cleaning of cylinders. Particular attention is paid to the cleaning of the engine mounts which must be minutely inspected for defects. These weak looking, but deceptively strong, structures are used to secure the high horsepower engines to the aircraft. This illustrates that we must clean so that adequate inspection may be accomplished to insure the safety of our equipment in flight.

Plant Maintenance

OUR Overhaul Base at Tulsa, Oklahoma is actually a factory occupying approximately 500,000 square feet of floor space and employing around 3,000 people. Of this floor space, about 75 percent is concrete flooring, which we clean with an alkaline type floor cleaner. We must be careful in the selection of products used to clean these concrete hangar floors since it has been found that harsh caustic type

(Turn to Page 177)



Newest addition to chemical specialties line of Milner Products Co., Jackson, Miss., is "White Wave" controlled suds detergent. Light blue package features dark lettering and solid red and reverse red letter strips at top and bottom of front panel. 18 ounce package.



A new compound being introduced this month by S. C. Johnson & Son, Inc., Racine, Wis., is "Blem." Product removes or reduces white rings, burns, heat marks and other blemishes on dark furniture. A 50 cent tube of "Blem" is being given away free as an introductory offer with purchases of Johnson's eight ounce bottles of "Pride," no-rub furniture polish. A 75 cent tube is being given away with the \$1.39 pint bottle of "Pride."



Now being marketed by Styron-Beggs Co., Newark, O., is "Pine Oil Disinfectant." Distributed east of the Mississippi, the product is recommended as a disinfectant and deodorizer for general household use. Glass containers, closures and cartons are supplied by Owens-Illinois Glass Co., Toledo; labels by Kalamazoo Label Co., Kalamazoo, Mich.



New high-style, pocket size aerosol unit of Ronor Corp., division of Engine Parts Mfg. Co., Cleveland, is made in various shapes to hold from one to three ounces of product. Container is two sections of stamped-out steel, joined by soldering or brazing. Valve structure is attached by means called for by the type of valve used. Unit is available as square, rectangular or bottle style. Various colors and types of coating and decoration are available.





← New "Pamper" shampoo of Toni Co., St. Paul., is now available in a counter display carton designed and made by American Coating Mills Division, Chicago, of Robert Gair Co., New York. Three sizes of shampoo: seven, 3½ and 1½ ounces are packed in a protective displays. Separate interior packaging forms a stepped display. Carton is printed in "Day-Glo" red, green and black inks on white board.



Newest addition to the line of aerosol ↑ specialties of Siliconite Chemical Laboratories, Boston, is "Siliconite Anti-Dust Spray." Product is applied to dust cloths, dust mops, brooms and to the interior of vacuum cleaner bags. The new spray is non-flammable.

New "Lanolin-Foam" beauty sponge of Kangaroo Products, Inc., Box 614, Allendale, N. J., features lanolin incorporated in detergent blocks. Product is recommended for bathing. Two detergent cakes, made by Atlantic Refining Co., Philadelphia, are inserted in sponge, which lathers profusely in hard or soft, warm or hot water. Detergent also contains bithionol as the germicidal agent. Sponge and eight cakes of detergent retail for \$1. Refills in bars of 20 are available for 69 cents. ↓



← "Winko" a new liquid detergent developed for washing dishes and light laundry, is currently being introduced by Linco Products Corp., Chicago. Introductory offer includes four-ounce bottle free with purchases of regular 14.4 ounce economy size bottle of "Winko." Bottles and molded plastic closures are made by Owens-Illinois Glass Co., Toledo, O. Labels in blue, red and black are produced by Thomas Printing Co.

Screw top jars and wiping tissues are the newest feature of "Formula SBS 30" SBS waterless hand cleaner of Sugar Beet Products Co., Saginaw, Mich. New SBS skin cleaner is applied to the skin and soil is rubbed off onto pocket size tissues contained in wash-up kit distributed with jars. ↓





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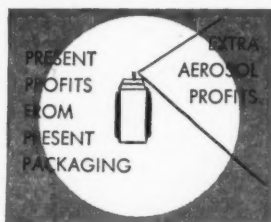
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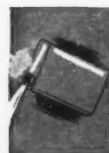
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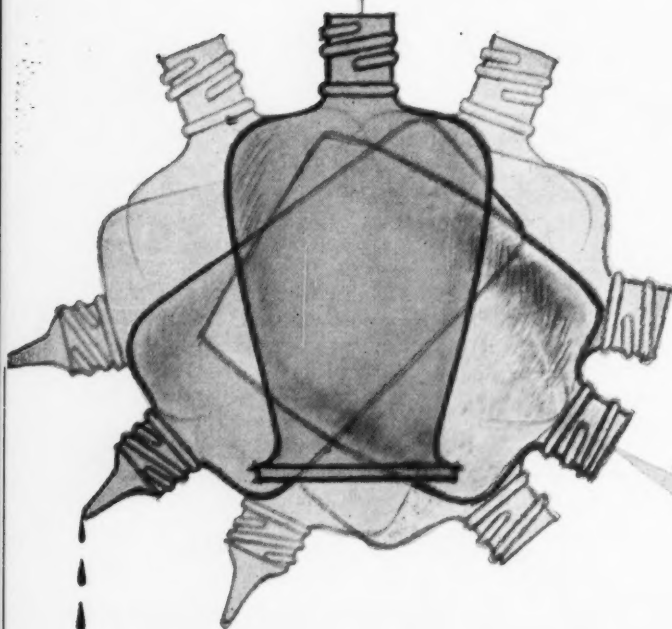
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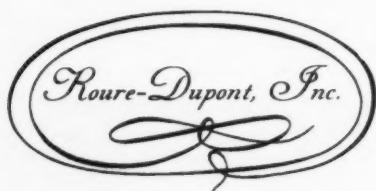


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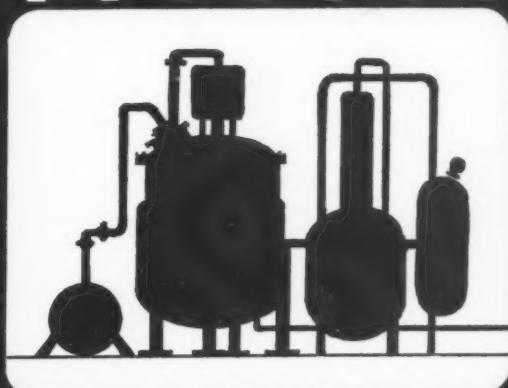
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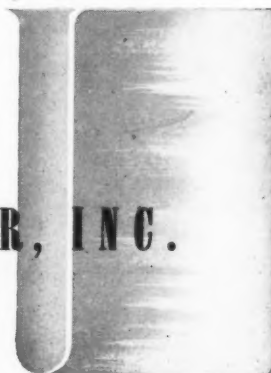


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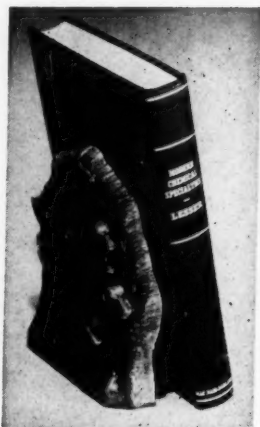
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News

L. H. Flett Retires

Lawrence H. Flett retired last month for reasons of health from full time activity with Na-



L. H. Flett

tional Aniline Division of Allied Chemical & Dye Corp., New York, after 35 years of service. He continues to serve the division as a consultant. For the past 12 years Mr. Flett has been director of National Aniline Division's new products division. His many contributions to the chemical field include pioneering work in the development of synthetic detergents in the United States. Mr. Flett holds about 75 patents and is the author of numerous publications and co-author of a number of books, the most recent of which is "*Maleic Anhydride Derivatives*."

Mr. Flett has been active in the American Chemical Society in many capacities and is currently the chairman elect of the division of chemical marketing and economics and chairman of the canvassing committee for the Precision Scientific Co. award. He received the Schoellkopf medal in 1942. A past president of the American Institute of Chemists and of the Chemical Market Research Association, he was a member of the group that re-established the Gordon Research

Conferences at New London, N. H. He is currently a contributing editor of *The Chemist*.

— ★ —

Colgate Names Grace

C. G. Grace became president of Colgate-Palmolive Ltd., Toronto, Canada, effective January 1, it was announced by William L. Sims, II, president of Colgate-Palmolive International, Inc., Jersey City, N. J. The appointment coincided with the retirement of C. R. Vint, former chief executive of the Canadian company. Mr. Vint, who has been associated with Colgate for 51 years, remains as a director.

Mr. Grace has been executive vice-president and general manager, and a member of the board of directors of the Canadian company since March 30, 1954. A native of Albany, Mo., and a graduate of Northwestern University, Mr. Grace joined the Colgate foreign sales and advertising department in 1929. Ten years later he was named general manager for Colgate-Palmolive Ltd., Kingston, Jamaica, covering British West Indies and Haiti. In 1948, Mr. Grace was transferred to Colombia as general manager of this subsidiary company where he remained until his appointment to Canada.

C. G. Grace



Lever Advances Three

William M. Bright, formerly assistant research director has been advanced to research and de-



J. David Justice

velopment director by Lever Brothers Co., New York, it was announced last month by L. B. Parsons, vice president in charge of the research and development division.

The appointments of David Justice as assistant director in charge of the chemical and physical department, and of Clyde Hayward as a senior research associate in the product improvement and development department were announced at the same time.

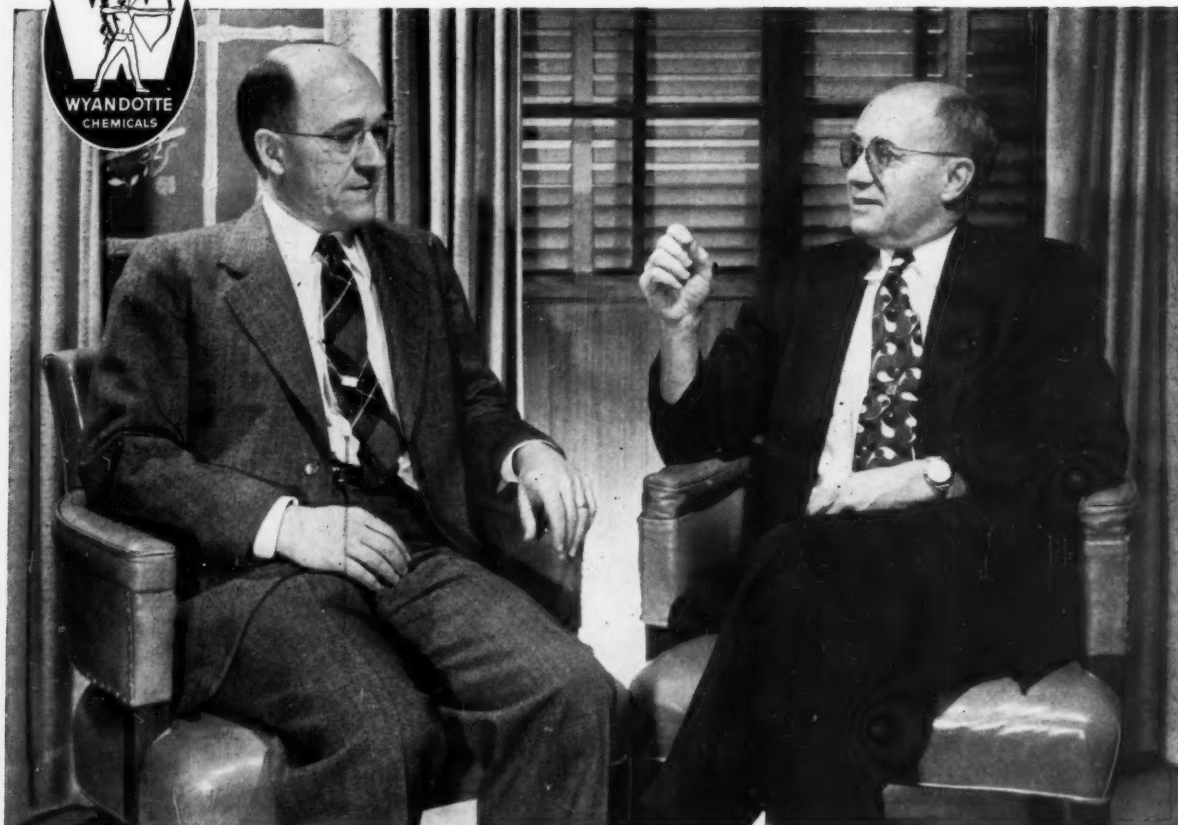
With Lever since 1952, Dr. Bright was formerly director of the Theodore Clark laboratory of Kendall Co., Boston. He holds many British and American patents.

Dr. Justice joined Lever in 1954 as a senior research associate. His previous associations include Carbide and Carbon Chemicals Co., New York, and U. S. Rubber Co.

Mr. Hayward went with Lever in 1946 as a chemist in the quality control laboratory of the firm's Cambridge, Mass. plant. Prior to his recent appointment he was acting assistant director of the technical services department.



Dependable Source for Chemical Raw Materials



Elmer Luckow (right), chief soap chemist for the Allen B. Wrisley Co., discusses benefits of Pluronic F68 with William Lieb

"Our 12-year search ended when we learned about Pluronic F68"

— William Lieb, chief cosmetic chemist, Allen B. Wrisley Co., Chicago

"For 12 years we searched for a nonionic, low-foaming, nonirritating surface active agent in solid form," says Chief Cosmetic Chemist William Lieb, Allen B. Wrisley Company, Chicago, makers of fine soaps and toiletries since 1862.

"We tested literally hundreds of products. None of them filled the bill. Then the Wyandotte representative suggested Pluronic F68. We found it fitted our needs exactly. There is no way of measuring in dollars the value of a development like this.

"We use other Wyandotte products, too. As a matter of fact, we

have been buyers of Wyandotte Soda Ash and Caustic since World War I. Deliveries have always been prompt; quality excellent. Wyandotte is big enough to handle our largest orders and give us expert technical assistance, yet small enough to provide personalized service and attention. We are well satisfied."

How about your business? Can you benefit by using some of Wyandotte's many products? Can you profit through Wyandotte's far-reaching developmental program and cooperative technical service? Contact our nearest district office,

or write Wyandotte . . . we're glad to be of service. Samples of Pluronic* F68 are available upon request. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

*REG. U.S. PAT. OFF.



HEADQUARTERS FOR ALKALIES

Soda Ash • Caustic Soda • Bicarbonate of Soda • Chlorine
Calcium Carbonate • Calcium Chloride • Glycols • Synthetic
Detergents • Agricultural Insecticides • Soil Conditioners
Other Organic and Inorganic Chemicals

Shumard to Huron Milling

Roland S. Shumard, formerly manager of fine chemicals development for Monsanto Chemical Co., St. Louis, has been appointed director of development and technical service for Huron Milling Co., New York, it was announced Jan. 10 by R. M. Farr, president of Huron. Mr. Shumard is making his headquarters in Huron's New York office. He had been with Monsanto since his graduation from Cornell University in 1937.

Essential Chems. Expands

The purchase of several manufacturing buildings, warehouses and acreage at Fredonia, Wis., was announced late last month by James H. Wheeler, president of Essential Chemicals Co., Milwaukee. The new acquisitions will be used for expansion purposes on newly developed chemical products. Some operations in Milwaukee will be moved to the new location by March 1. The company's executive offices and some manufacturing will continue in Milwaukee.

Verley Moves Chi. Office

The Chicago division office of Albert Verley & Co., Chicago, was recently transferred to 1018-24 South Wabash Ave., Chicago 5. The telephone number is Wabash 2-8835.

In Wyandotte Post

The appointment of Dr. Lucas P. Kyrides as staff consultant in organic chemistry to the research and development division of Wyandotte Chemicals Corp., Wyandotte, Mich., was announced recently.

Prior to joining Wyandotte, Dr. Kyrides was president and director of research of Sumner Chemical Co., Newark, N. J. He has also served as research director of the organic division of Monsanto Chemical Co., St. Louis.

Fritzsche Expands Offices

Additional space recently acquired by Fritzsche Brothers, Inc., New York, was shown to the out-of-town representatives who attended the firm's annual week-long sales conference held at the New Yorker Hotel, last month. The new facilities consist of 20,000 square feet of additional floor space on the 13th floor of the Port Authority Building where Fritzsche has its headquarters. The perfume and technical division has been transferred to this new location as well as the advertising department, sales promotion, library and print shop. These moves enable other departments, including the flavor and export divisions, to expand.

In the course of the sales meeting, information on company policy, plans, and accomplishments was brought to the salesmen by members of the sales, research, purchasing, production, advertising, flavor, and perfume departments. Participants were welcomed by John H. Montgomery, president, who was present at all meetings, and by Frederick H. Leonhardt, chairman of the board. The conference ended with a cocktail party, buffet supper and dance at the Sherry Netherlands Hotel.

Drackett Buys L. A. Firms

Drackett Co., Cincinnati, manufacturer of "Windex" and "Drano," has acquired the entire capital stock of Calmar Co. and 80 percent ownership of Maclin Co., both of Los Angeles, it was announced last month by Roger Drackett, president. The transaction is said to involve more than one million dollars. Calmar Co. makes plastic injection molders and dispensing devices and Maclin manufactures molding compounds. Both firms operate large plants in the western section of Los Angeles and their combined annual sales are said to exceed \$2,000,000.

Monsanto Advtg. Changes

The appointment of William B. Toulouse as advertising manager of the inorganic chemicals division of Monsanto Chemical Co., St. Louis, was announced last month by Tom K. Smith, Jr., division manager of marketing. Mr. Toulouse had been assistant to the advertising manager of the company's organic chemicals division. He joined Monsanto in 1952.

H. Chandler Holmes, formerly advertising manager of Monsanto's inorganic chemicals division has been named creative services manager of the company's advertising department, Howard A. Marple, director of advertising and public relations, announced a few days earlier. Mr. Holmes has been with Monsanto since 1951, and was named advertising manager of the company's former phosphate division in June, 1952.

Photo taken during Fritzsche dinner at Sherry Netherlands Hotel, New York.





WHY WAIT TO CONVERT TO 73% CAUSTIC SODA?

Every day you delay may be costing you money

Several customers who recently changed from 50% to 73% caustic soda said they would have converted sooner but they didn't think the *savings story* applied to their operations.

Perhaps you have not analyzed recently the possible profits from converting to 73%. But don't dismiss the matter lightly, because a little figuring may disclose that you, too, are in a position to realize substantial savings.

This applies whether you are a large user or a small user, and whether you use high strength

directly or dilute it. Actually, savings often apply to some customers who buy solid and flake caustic.

A combination of factors determines how great your savings will be. Location plays an important part. But it costs you nothing to find out. Our Technical Service Department will be glad to assign one of its specialists to discuss your individual case, to make recommendations and to estimate your annual savings.

So why wait? Do it now. Write our Caustic Soda Department at the Pittsburgh office.

COLUMBIA-SOUTHERN CHEMICAL CORPORATION

SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY
ONE GATEWAY CENTER • PITTSBURGH 22 • PENNSYLVANIA



DISTRICT OFFICES: Cincinnati
Charlotte • Chicago • Cleveland
Boston • New York • St. Louis
Minneapolis • New Orleans
Dallas • Houston • Pittsburgh
Philadelphia • San Francisco

Van Ameringen Joins Firm

Henry P. van Ameringen has joined van Ameringen-Haebler, Inc., New York, it was announced.



Henry P. van Ameringen

last month. The son of the firm's president, he was graduated from Georgetown University in 1952 with a B.S. degree in Foreign Trade, and has since served with van Ameringen-Haebler, S.A.R.L., French subsidiary of the New York company. He will devote much of his time to creative work in fragrances.

Renderers Assn. Moves

The National Renderers Association announced early this month that it was moving its headquarters from 1424 K St., N.W., Washington 5, D. C. to 130 North Wells St., Chicago. Frank B. Wise is secretary of the association.

Armour Moves Office

General offices of the chemical division of Armour & Co., Chicago, were moved early this month from 120 Broadway, New York, to 2500 83rd St., North Bergen, N. J., where the company maintains offices for its glycerine and soap divisions. The new telephone number is LO 4-5955.

Joins Phila. Quartz

Philadelphia Quartz Co., Philadelphia, recently announced the appointment of Dr. Walter L. Schleyer to its chemical department staff. He was formerly research as-

sociate at Columbia University, College of Physicians and Surgeons, New York City. Dr. Schleyer is being assigned to technical service work.

Coming Meetings

American Society for Testing Materials, committee week, Netherlands Plaza Hotel, Cincinnati, Jan. 31-Feb. 4; annual meeting, Chalfonte-Haddon Hall, Atlantic City, N.J., June 26-July 7.

Association of American Soap and Glycerine Producers, 28th annual convention, Waldorf-Astoria Hotel, New York, Jan. 26, 27 and 28.

Association of Consulting Chemists and Chemical Engineers, symposium, Belmont Plaza Hotel, New York, April 26.

Chemical and Allied Product Buyers' Group of the National Association of Purchasing Agents, Commodore Hotel, New York, Jan. 25.

Chemical Market Research Association joint meeting with Commercial Chemical Development Association, Edgewater Beach Hotel, Chicago, Jan. 20-21; annual meeting, Plaza Hotel, New York, May 18-19.

Chemical Specialties Manufacturers Association, 41st mid-year meeting, Drake Hotel, Chicago, May 16-18.

Drug, Chemical and Allied Trades section of the New York Board of Trade, annual dinner, Waldorf-Astoria Hotel, New York, March 3.

National Pest Control Association, Purdue Pest Control Operators' Conference, Purdue University, Lafayette, Ind., Jan. 31-Feb. 4; Southern Pest Control Operators' Conference, Louisiana State University, Baton Rouge, La., Jan. 31-Feb. 2; Eastern Pest Control Operators' Conference, University of Massachusetts, Amherst, Mass., Feb. 3-5.

National Sanitary Supply Association, annual convention and trade show, Convention Hall, Atlantic City, March 20-23.

Packing Machinery Manufacturers Institute, semi-annual meeting, Palmer House, Chicago, April 16-17, 1955; annual meeting, The Homestead, Hot Springs, Va., Sept. 15-18.

Plant Maintenance and Engineering Show, International Amphitheater, Chicago, Jan. 24-27.

Synthetic Organic Manufacturers' Association, monthly luncheon meeting, Commodore Hotel, New York, Feb. 9.

Toilet Goods Association, annual meeting, Waldorf-Astoria Hotel, New York, May 10-12.

D&O Consulting Service

Herbert Kainik is now available as a consultant on perfuming shampoo for private label packaging,



Herbert Kainik

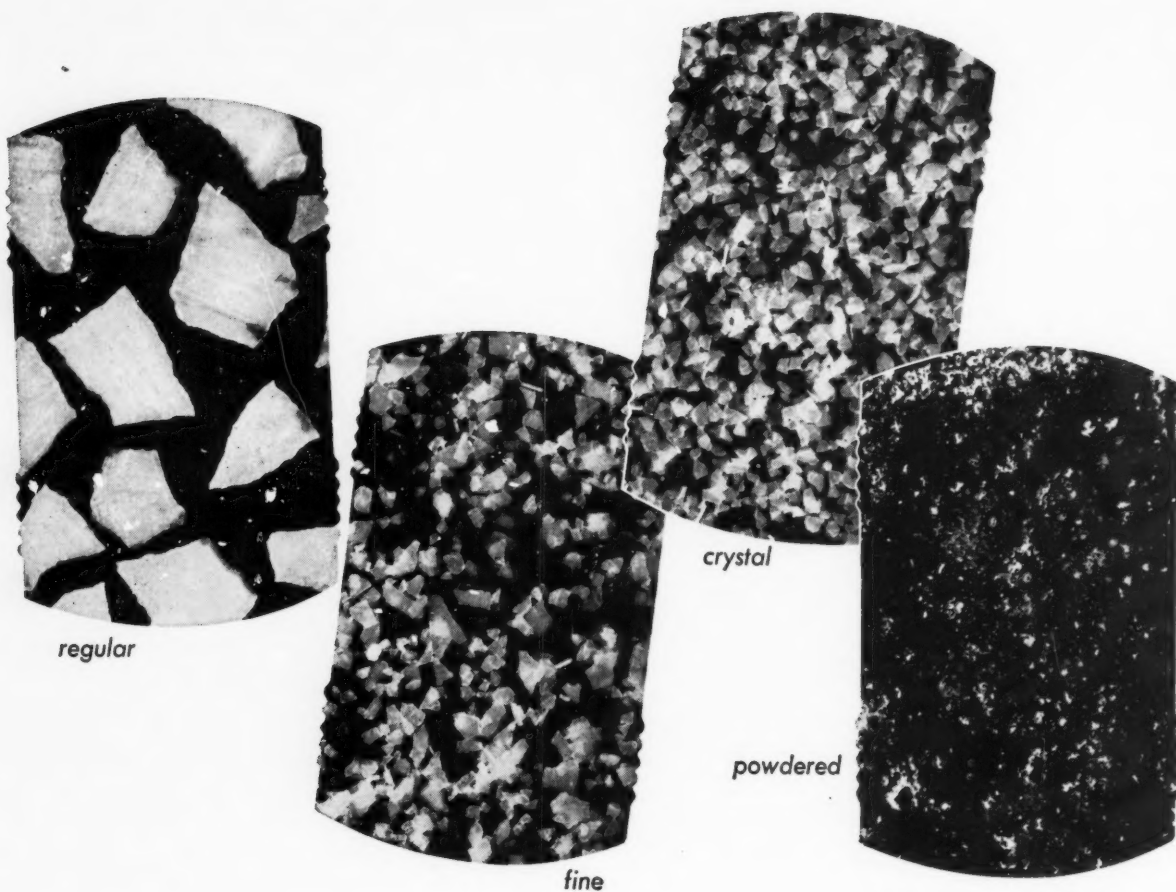
Dodge & Olcott, Inc., New York announced recently. He is available for consultation and, where necessary, for work at plants of D&O's customers. A technical staff has been assigned to Mr. Kainik and will work with him on outside assignments. Mr. Kainik, a specialist in the aerosol field, is treasurer of the American Society of Perfumers.

Lester F. Hoyt Dies

Lester F. Hoyt, detergent chemist with National Aniline Division, Allied Chemical and Dye Corp., New York, died Dec. 22. He was 63 years old. Mr. Hoyt served in the detergent application and research department of National Aniline in Buffalo, N. Y. He was a charter member of the American Oil Chemists Society and formerly held the position of research director with Larkin Co., Buffalo.

Stephenson Recovers

James H. R. Stephenson of the New York sales staff of Albert Verley & Co., Chicago, returned to work late last month following an appendectomy, which he underwent on Dec. 3 at Stamford (Conn.) Hospital. Two weeks after Mr. Stephenson's operation his daughter was operated on for the removal of her appendix.



photos show actual size of flakes

Flake caustic soda: pick the size that's right for YOU

Choosing the right size caustic soda flake will help keep your product at its uniform best. With these four Hooker flake sizes to choose from, you're sure of getting one or more sizes exactly right for you.

Which Size Should You Use?

Drop us a note and we'll send you

samples and technical data to help you determine which of these Hooker flake sizes is your best buy.

If you use less than carload lots, ask your Hooker jobber to stock the sizes you need. (If you are not familiar with the Hooker jobber in your area, we'll be glad to send you his address.)



Flakes arrive dry, stay dry in these Hooker drums. Six lugs hold the lid securely on extra-large opening. Easy air-tight re-sealing protects unused caustic. You can also get Hooker flake caustic in reusable open-head drums at slight additional charge.



From the Salt of the Earth

HOOKER ELECTROCHEMICAL COMPANY

BUFFALO AVENUE & UNION ST., NIAGARA FALLS, N. Y.

NIAGARA FALLS • TACOMA • MONTAGUE, MICH. • NEW YORK • CHICAGO • LOS ANGELES



Shown in the first row in the picture taken during recent Christmas party of Givaudan-Delawanna, Inc., New York, above are F. Stiritz, Dr. Max Luthy, vice-president and factory manager; Miss A. Schauder, E. R. Durrer, president, H. F. Duffy, treasurer and A. Gogolin. In the rear, E. Matthiae, M. Motyka, J. Ciccone, D. Pavan, J. Bardzik, C. Dolecki, M. Switek, E. DeLuca and S. Olsiewski.

Givaudan Christmas Party

Approximately 400 employees of Givaudan-Delawanna, Inc., New York, attended the firm's annual Christmas party held December 18 at the Swiss Chalet, Rochelle Park, N. J. E. R. Durrer, president; Max Luthy, vice president and plant manager; and H. F. Duffy, treasurer, addressed the gathering, at which 12 twenty-five year veteran employees received gold watches. A thirteenth employee had received his watch at a previous dinner tendered to him at the company's Chicago branch, bringing the total to fifty-three. The thirteen include John Bardzik, Joseph Ciccone, Emil De Luca, Charles Dolecki, Alexander J. Gogolin, Edward Matthiae, Matthew Motyka, Thomas F. Novak, Stanley Olsiewski, Dante Pavan, Anne Schauder, Fred Stiritz, and Michael Switek.

Marketer for Stanolind

Stanolind Oil and Gas Co., Tulsa, announced last month that it has signed an exclusive contract with R. W. Greeff & Co., New York, for marketing all water soluble chemicals, including acids, alcohols, aldehydes, and ketones, which will be produced at Stanolind's chemical plant expected to be on stream in the fall of 1955. The announcement was made by E. F. Bullard, president of Stanolind. Design capacity

of the new plant in Brownsville, Tex., is approximately 125 million pounds of chemicals per year.

The Greeff organization has been in business since 1880. The firm is headed by Ira Vandewater, president, and has offices at 10 Rockefeller Plaza.

N. Y. BIMS Dinner Feb. 10

The annual dinner of BIMS of New York will be held at the New York Athletic Club, Thursday evening, Feb. 10. Cocktails are served beginning at six p.m., with dinner to be served at seven p.m.

First meeting of the President's Committee for the White House Conference on Education finds Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare, conferring with Committee chairman Neil H. McElroy, president of Procter & Gamble Co., Cincinnati, and vice-chairman, Dr. Finis E. Engleman, left, Commissioner of Education in Connecticut. The 32-member Committee, composed of prominent citizens met in Washington on Dec. 2 and set Nov. 28 to Dec. 1, 1955 as the date for the White House Conference. Individual conferences in each of the states will precede the White House Conference. Out of the national sessions will come a series of recommendations aimed at solving the nation's grave educational problems.



W&T Absorbs Hardesty

The Harchem Division, Wallace & Tiernan, Inc., Belleville, N. J., will conduct all business previously carried on by W. C. Hardesty Co., it was announced recently by F. G. Merckel, president. The change became effective January 1. It will not change the Hardesty activities in the fatty acid and related fields since W. C. Hardesty Co. has been a wholly owned Wallace & Tiernan subsidiary since 1951. At that time, Hardesty had a partly owned subsidiary, Hardesty Chemical Co., subsequently, wholly acquired and merged into W. C. Hardesty Co., Inc. to become the Hardesty Chemical Division. The merger of these two operating units into the Harchem Division is simply a further step in the announced Wallace & Tiernan policy to expand and integrate its activities.

The main plant of Hardesty is at Dover, O. and a second plant is operated in Toronto, Canada by a subsidiary, W. C. Hardesty Co. of Canada, Ltd. General offices are at Belleville, N. J.

No personal changes are contemplated and the "Harchem" and "Century" brand names will be continued.

Save work—save money
with
easy formulating

DU PONT

*Duponol** **EP**
REG. U. S. PAT. OFF.
DETERGENT



Now Du Pont brings you a new detergent, "DUPONOL" EP, that makes formulation of clear liquid shampoos easier—production less costly. See how "DUPONOL" EP can improve your product . . .

NEEDS LESS THICKENING—"DUPONOL" EP is far more responsive to thickening than other liquid shampoo detergents. You use smaller amounts of costly thickeners—and still get more detergent efficiency, more foaming properties, and a lower cloud point.

HIGHER CLEANSING POWER—"DUPONOL" EP creates maximum cleansing efficiency in your shampoo, yet its action is easily controlled to leave the hair soft and manageable.

EXCELLENT COLOR STABILITY—"DUPONOL" EP maintains its light color and low cloud point through exposure to heat, light and shelf life.

FIRST TWO-IN-ONE DETERGENT—"DUPONOL" EP is the first detergent on the market that formulates into a wide variety of both clear liquid and liquid cream shampoos. Save money, save storage space with a single detergent for both types of shampoo!

Du Pont has developed and tested dozens of shampoo formulations based on "DUPONOL" EP. Write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Div., Wilmington 98, Delaware, for your copy of "DUPONOL" EP SHAMPOO FORMULATIONS."

*Du Pont Trade-Mark for Surface-Active Agents.

DU PONT *Duponol* **EP**
REG. U. S. PAT. OFF.
DETERGENT



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY



During their recent three weeks visit to this country, Pierre Chauvet, head of Pierre Chauvet & Co. of Seillans, France, and his Paris representative, Charles Roux, were entertained on numerous occasions by the executives of Fritzsche Brothers, with whom they have long enjoyed relations. In the above picture, Messrs. Chauvet and Roux are being entertained at a luncheon given in their honor at Charles Restaurant by F. H. Leonhardt, chairman of the board, and Mrs. Leonhardt. On other occasions they were entertained at the homes of Mr. and Mrs. John H. Montgomery, Mr. and Mrs. John L. Cassullo, and by Dr. Ernest Guenther, whose close collaboration with Mr. Chauvet has extended over many years. Seated around the table (left to right) are: John L. Cassullo, Miss Mary G. Neary, Charles Roux, Mrs. Leonhardt, Mr. Leonhardt, Mrs. John Baylis, Mr. Chauvet, Dr. Guenther, Mrs. Montgomery and Mr. Montgomery. Standing, rear, R. W. Wilmer, George H. Ammersbach, Dr. E. H. Hamann, Fred Leonhardt, Jr., and H. P. Wesemann.

Lee, Strain join Colgate

Benjamin H. Lee and Charles B. Strain have been appointed assistant merchandising managers of the home office staff of the toilet goods division of Colgate-Palmolive Co., Jersey City, N. J., it was announced recently by R. E. Hilbrant, vice-president in charge of the division. Mr. Lee, formerly vice president and general sales manager of A. D. McKelvy Co., New York, marketers of "Seaforth" toiletries, is now responsible for the merchandising of Colgate's "Lustre-Creme" preparations. Mr. Strain,

who was previously associated with Lambert Co., Newark, N. J., has been assigned to "Halo" shampoo and "Colgate" shave preparations.

Aerosol Grease Remover

A pressure packed remover of grease and oil stains from wall-paper, paint and other hard surfaces was introduced recently by Schafco, Lancaster, Pa., under the tradename "Jif Job." Propellant for the new aerosol product is du Pont's "Freon." The product is applied by spraying a generous coating on and around the grease or oil spot to

be removed. The spray is allowed to dry until the film turns white, and then is wiped off with soft cloth.

Aerosol Perfuming

(From Page 41)

as to solubility, vapor pressure and inertness brought about by the presence of the propellant. For this purpose the lab is fully equipped for filling every type of aerosol container . . . both by the pressure and sub-zero process. In aerosol packaging the pressure filling system is best suited for foam products, such as shave creams, shampoos, hand lotions, etc., while the cold system produces better results in such items as insecticides, room deodorants, colognes, hair lacquers and antiperspirants. In addition, a specially built capping machine for the filling of low pressure glass and plastic coated containers has recently been installed so that the lab services will be completely up-to-date. Finally, the lab contains a water-bath for testing leakage and a corrosion cabinet for checking shelf life. Since an occasional package may remain on the shelf for longer than anticipated, extreme care must be taken so that no chemical change in any of the ingredients causes corrosion. As it is impossible to wait six to nine months to determine this particular shelf-life stability, a specially designed corrosion box has been installed where containers are kept for one month at constant temperature, this period of time being the equivalent of a year's shelf life at normal temperatures. After removal, cans are cut apart and examined minutely for evidence of corrosion, clogging or other incompatibility.

All equipment has been custom-made to meet the specific requirements of the extensive testing of a large variety of products. It is of an experimental capacity, not designed for production. This service is complete in every detail so that when a formula, together with samples, is approved and leaves the lab it is ready to be placed into the hands of the consumer.

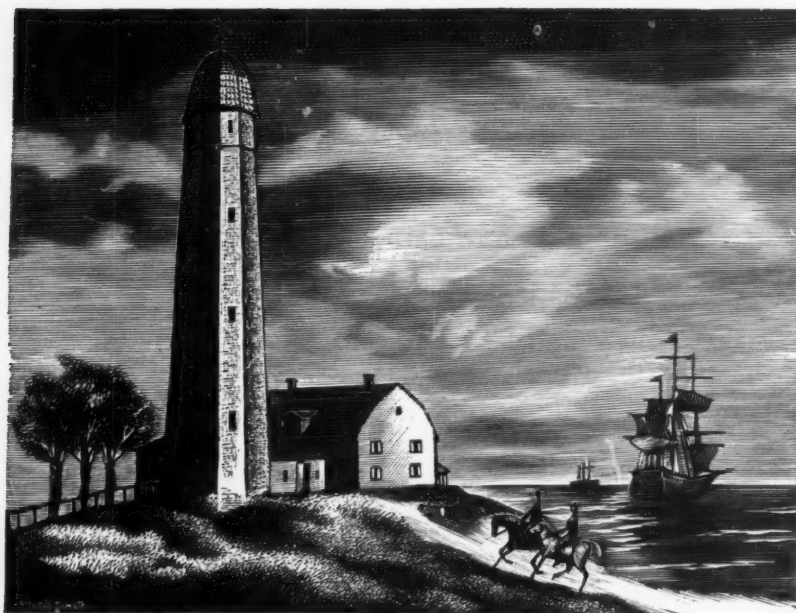
Benjamin H. Lee



Charles B. Strain



FAMOUS LIGHTHOUSES OF AMERICA



SANDY HOOK LIGHTHOUSE, built in 1764 by the Colony of New York, is the oldest original light tower in use in the United States. A massive structure, octagonal in form with walls of stone seven feet thick at the base, it stands today as it was built except for an added inner lining of brick. This famous lighthouse is located on a narrow peninsula on the New Jersey coast sixteen miles due south of New York City and still helps to guide ships into New York's lower bay.

Sure guidance for users of electrochemicals is the long-recognized quality of Niagara Alkali products. A pioneer in this field, Niagara has helped manufacturers improve their products and the efficiency of their processes through the use of Nialk® Liquid Chlorine, Nialk Caustic Potash, Nialk Carbonate of Potash, Nialk Paradichlorobenzene, Nialk Caustic Soda, Nialk TRICHLORethylene, Niagathal® (Tetrachloro Phthalic Anhydride).

NIAGARA ALKALI COMPANY

50 East 42nd Street, New York 17, N. Y.

Stokes & Smith Dinner

A dinner honoring veteran employees of Stokes and Smith Co., Philadelphia manufacturers of packaging and paper box machinery and subsidiary of Food Machinery and Chemical Corp., San Jose, Calif., was held Dec. 7, at Cannstatter-Volksfest-Verein, Torresdale, Pa. Paul L. Davies, president of Food Machinery presented the awards at the dinner, which was attended by 105.

Charles Sonneborn and Carl E. Shaeffer, the two Stokes and Smith employees having the longest service records of 49 years each, were presented with watches. Similar presentations were made to 34 employees having 35 or more years of service.

Service pins were awarded to those employees who have been with the firm for five years and over.

The arrangements were under the direction of William E. Huguenin, plant manager, and J. Russell Sonneborn, personnel director.

AHA Names Snell

The appointment of Foster D. Snell, Inc., New York, to do the testing and research on a trial basis for the American Hotel Association, New York, was announced last month by AHA. Arrangements with Snell were made in accordance with the new policy set up by AHA's research committee to comply with a planning commission recommendation.

The new policy on testing for member hotels requires that samples, to qualify for free laboratory testing service, be of a type widely used by hotels and of a brand generally available throughout the U. S. This excludes among others, products of foreign manufacturers which are not widely distributed in the U. S. and private brand products, such as those packaged under a special label for a hotel.

Foster D. Snell, Inc., has a staff of over 75 scientific, technical and engineering personnel divided



Top left: Frederick H. Ungerer, chairman of the board, and Kenneth G. Voorhees, president of Ungerer & Co., New York, addressing annual sales meeting in New York City, last month. Lower photograph shows, from left to right, W. A. Bush, secretary; G. H. MacDonald; N. E. Gallagher; F. R. Schumm; J. R. Martin; Dr. Althausen; F. M. Miller; W. E. Kell; F. H. Ungerer, chairman; E. C. Dohrmann; A. G. Young; K. G. Voorhees, president; I. H. Budd, vice-president; Henry Budd; S. Goodwillie, general sales manager; W. H. Dunney, vice-president; Ira Bennett and J. L. Slais.

into research groups that work in one or more specific fields. The firm is employed by manufacturers, advertising agencies, law firms, investment houses, trade associations and the U. S. Government. Among the trade associations served by Snell are the Chemical Specialties Manufacturers Assn., Maple Flooring Manufacturers Assn., American Spice Assn. and seven others.

New Mona Detergent

Mona Industries, Inc., Paterson, N. J., introduced recently a new alkylolamide type detergent of pale yellow color and said to be practically free of odor. The product is marketed under the trade name "Monamine ADD-100" and described in detail in technical bulletin #217, available from Mona Industries, Inc., Paterson 4, N. J.

Suds, Shine and SELL'S

The growing preference for liquid detergent formulations is showing up in the sales picture... last year there was a phenomenal 90% industry-wide increase in these sales.

And no wonder... liquid detergent formulations offer real economy; instant solubility in any water; a pleasing fragrance; sneeze-free washing; dishes that dry shining bright; no sink scum to scrub away.

Many of today's best-selling liquid detergents are formulated with Atlantic ULTRAWETS. Economy is one reason. High performance characteristics allow a saving on the quantity needed to maintain product efficiency. Add to this saving a further one: you can buy the ULTRAWETS at significantly low prices in tank car or bulk lots.

Ask us for detailed information on the ULTRAWETS. Our Chemical Products Sales Division can supply formulations, or help you develop your own. Write, wire, phone or send the coupon today.

ATLANTIC
PETROLEUM
CHEMICALS

Philadelphia, Providence, Charlotte, Chicago

In the West: L. H. Butcher Co.

In Canada: Naugatuck Chemicals Division
of Dominion Rubber Company, Ltd.

In Europe: Atlantic Chemicals SAB,
Antwerp, Belgium

THE ATLANTIC REFINING COMPANY
Dept. E-1 Chemical Products Sales
260 South Broad Street, Philadelphia 1, Pa.

Please send me information on the ULTRAWETS for
liquid detergent formulations.

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____



The ULTRAWETS wet, penetrate,
clean and emulsify



Elias D. Stults Dies

Elias D. Stults, 72, president of Welch, Holme & Clark Co., New York, died Dec. 10 at Overlook



Elias D. Stults

Hospital, Summit, N. J. Mr. Stults had suffered a heart attack on Dec. 3, and was taken to the hospital that day.

Mr. Stults joined Welch, Holme & Clark, which was founded in 1838, in 1898 as office boy. Later he became a salesman and in 1929 was chosen as president. He was a member of the Oil Trades Associations of New York and New Jersey, and the New York Board of Trade.

A resident of Summit, N. J., Mr. Stults is survived by his widow. They had no children.

— ★ —

Hoffman Back at Work

Dr. William A. Hoffman, president of the New York essential oil firm of William A. Hoffman, Inc. recently returned to work after a two month period recovering from a fracture of the elbow and resulting complications. Dr. Hoffman was on a European business trip when the accident occurred in Paris last fall, and two operations on the elbow delayed his return to work until recently.

Before he was forced to return home because of the injury, Dr. Hoffman obtained exclusive representation in the United States for two French firms, Josef Gazan Societe Anonyme of Marseilles

and Le Fruit Frais Concentrate in Courbevoie-Paris.

— ★ —

Hathaway to Oronite

Norman E. Hathaway was recently appointed western sales manager for Oronite Chemical Co., subsidiary of Standard Oil Co. of California, San Francisco. He makes his headquarters in San Francisco, with jurisdiction over sales operations in the Far West, western Canada and the Hawaiian Islands.

The new Oronite executive was previously director, Chemical and Rubber Division, Business and Defense Services Administration, Department of Commerce, Washington, D. C., and general sales manager of industrial chemicals for Davison Chemical Company.

A native of Corvallis, Ore., Mr. Hathaway is a graduate of the University of Maryland in chemical engineering and a Navy veteran.

— ★ —

Mitchell Forms Own Firm

William F. Mitchell, vice president, Pennsylvania Salt Manufacturing Co., Philadelphia, has asked to be relieved of full time responsibility for purchasing, central engineering, and traffic, effective December 31, it was announced by Pennsalt president George B. Beitzel. Mr. Mitchell established the Mitco Corp. of which he is president, as of January 1, 1955.

Newly elected officers for 1955 of the Chicago section of the Society of Cosmetic Chemists are, left to right: Seymour Komblau, Lady Esther, Ltd., secretary; William E. Lieb, Allen B. Wrisley Co., chairman; Sylvia Kramer, Marcelle Cosmetics, Inc., chairman-elect; Peter Parker, Kolar Laboratories, treasurer.



D'Aigremont Back in U. S.

Jacques d'Aigremont, executive vice president of Roure-Dupont, Inc., New York, returned re-



Jacques D'Aigremont

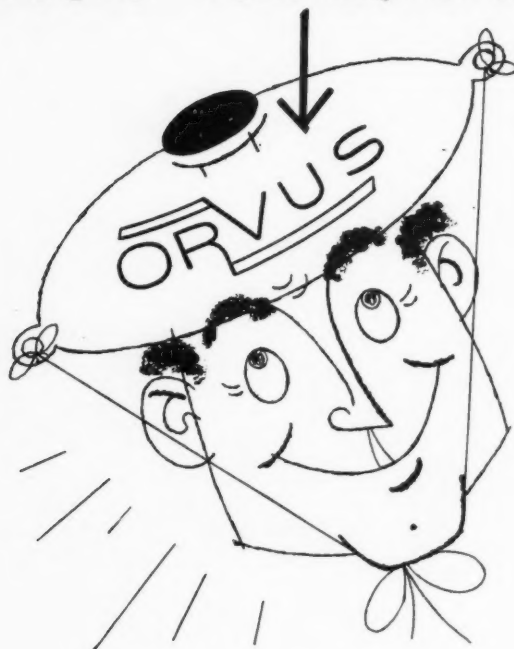
cently from a flying business trip to South and Central America. He reported that business conditions were very satisfactory.

— ★ —

P & G Sells Gwynne Bldg.

Procter and Gamble Co., Cincinnati, sold its headquarters, the Gwynne building in Cincinnati to A. A. Lander and W. W. Lynch of Dallas, Tex., it was announced last month. P & G. will continue to occupy the building on a short-term lease until its new headquarters in Cincinnati are completed. The transaction also includes the adjoining Strause Building and the Gwynne Building Annex.

NO MIXING "HEADACHES"



**WHEN YOU'RE
USING
ORVUS
AB GRANULES!***

*An unusually efficient synthetic detergent of the alkyl aryl sulfonate type.

What's more irritating—or costly—than a detergent which breaks down and turns to dust when you start mixing it with other ingredients? Or that insists on layering, sifting, or settling out?

The unusual granule characteristics of Orvus AB eliminates such mixing "headaches." Unlike many "blown" products, Orvus AB Granules resemble miniature sponges rather than hollow spheres. Because of this, you get minimum stratification, sifting or settling when Orvus AB goes into your mixers. And you get more uniform mixtures!

Orvus AB has exceptional detergent, sudsing, wetting, dispersing and emulsifying properties. It blends readily and intimately with other ingredients—an essential for the converter. For information regarding specific applications and formulas incorporating Orvus AB Granules mail a postcard to



→ *Procter & Gamble*

BULK SOAP SALES DEPARTMENT
P. O. BOX 599
CINCINNATI 1, OHIO

▶ America's largest manufacturers of soaps and synthetic detergents.

Look to
SHULTON
for new
chemical
achievements

Rhodinol Shulton, for example ...

- a true Rhodinol
- made by a new process
- with consistent odor and chemical character
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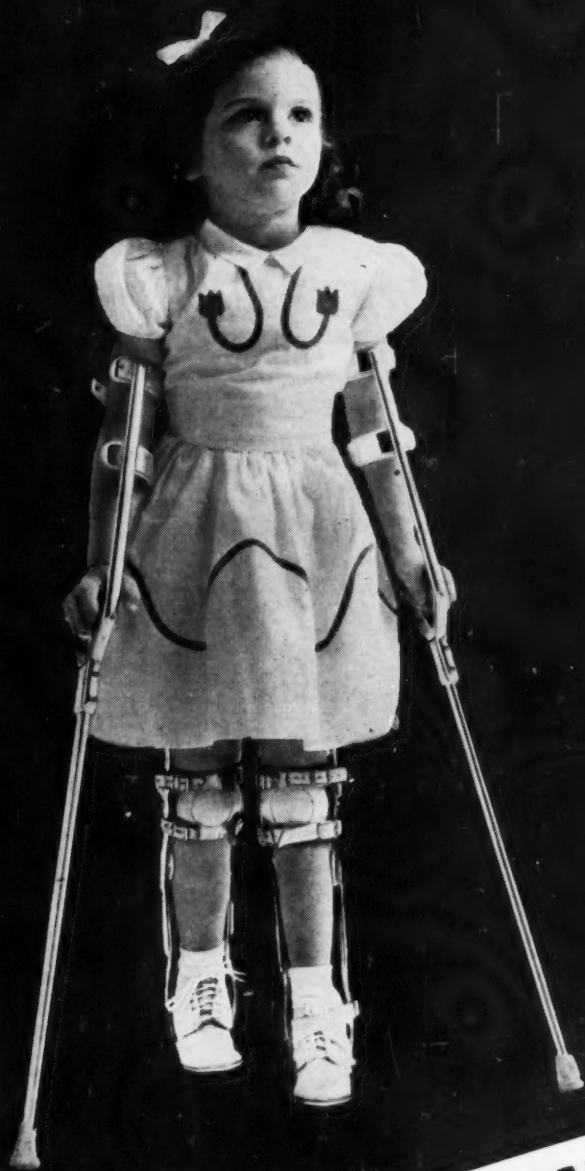
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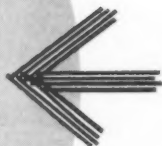
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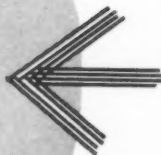
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Bido and AWARDS

Low Trio Chemical Bid

Trio Chemical Works, Inc., Brooklyn, N. Y., submitted the low bid of \$1.05 on metal cleaner in a recent opening for miscellaneous supplies by the Quartermaster, Jeffersonville, Ind. Nov. 1, inv. 17.

Packwood Soap Award

G. H. Packwood Mfg. Co., St. Louis, received the award on 8,000 cartons of borax soap powder with the low bid of 58 cents in a recent opening for miscellaneous supplies by the Federal Supply Service, Chicago. Oct. 15, inv. WCH-80354.

Award to Comfort

Comfort Mfg. Co., Chicago, received the award on brushless shaving cream with low bids of 98 cents a tube, item 1, and 88 cents, item 2, in a recent opening for miscellaneous supplies by the Veterans Administration, Washington, D. C. Oct. 19, inv. S-180.

Soap Dispensers Award

Pacific Coast Borax Co., Los Angeles, received the award on 480 soap dispensers with a low bid of \$2.793 in a recent opening for miscellaneous supplies by the Federal Supply Service, Chicago. Dec. 1, inv. DCH-80815.

FSS Soap Awards

In a recent opening for soap by the Federal Supply Service, Denver, awards were won by three companies with the following low bids: E. J. Scarry & Co., Denver, item 1, 71 cents; Chicago Sanitary Products Co., Chicago, item 2, 64 cents, item 3, 49 cents, item 5, 19 cents; Davies-Young Soap Co., Dayton, O., item 4, 10 cents. Dec. 3, inv. 4974.

Low Hand Cleaner Bid

G. H. Packwood Mfg. Co., St. Louis, and Capital Office Supply Co., Washington, D. C., both submitted the low bid of 25 cents on waterless hand cleaner in a recent

opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C. Dec. 22, inv. 2B-54790-R.

Low Trio Insecticide Bid

Trio Chemical Works, Inc., Brooklyn, submitted the low bid of \$8.65 on insecticide in a recent opening for miscellaneous supplies by the Navy Purchasing Office, New York. Dec. 20, inv. 160.

Pacific Coast Borax Award

In a recent opening for miscellaneous supplies by the Federal Supply Service, San Francisco, the award on borax soap powder went to Pacific Coast Borax Co., Los Angeles, with the following low bids: item 1a, 39 cents; item 1b, 37.25 cents; item 1c, 36.95 cents; item 2a, 56.75 cents; item 2b, 55 cents; item 2c, 54.7 cents. Nov. 29, inv. SF-2958.

Low Dishwash Comp. Bids

Washington Chemical Sales, Washington, D. C., submitted the low bids of nine cents, on items 1a & 1b; 8.9 cents, item 2, on dishwashing compound in a recent opening for miscellaneous supplies by the Federal Supply Service, San Francisco. Nov. 29, inv. SF-3598.

Murro, Harley Low Bids

Murro Chemical Co., Portsmouth, Va., and Harley Soap Co., Philadelphia, submitted the low bids on soap in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C. Murro bid nine cents on item 1, and Harley bid 52.4 cents on item 2. Dec. 10, inv. 2B-54481-R.

Navy Insecticides Bids

In a recent opening for miscellaneous supplies by the Navy purchasing office, New York, the following low bids on insecticides were submitted: Triangle Chemical Corp., Macon, Ga., item 1a, 78.5

cents; Barco Chemical Co., Des Moines, Ia.; item 1b, 79 cents, item 1c, 81 cents; Oggie Chemical Industry, San Antonio, item 1d, 86 cents; Associated Sales & Supply Corp., St. Louis, item 1e, 80 cents; Bray Oil Co., Los Angeles, item 1f, 77.89 cents; Wyandotte Chemicals Corp., Los Nientos, Calif., item 1g, 78.9 cents. Dec. 20, inv. 165.

Low Hand Cleaner Bids

Hillcrest Laboratories, Spring Valley, N. Y., and Quickee Products Co., Yonkers, N. Y., submitted low bids on hand cleaner in a recent opening for miscellaneous supplies by the Federal Supply Service, New York. Hillcrest's bids were item 1, 13.9 cents, item 12, 18.6 cents, item 14, 20.4 cents, and Quickee's bid were items 2 thru 6, 14.5 cents, items 7 thru 11, 13, 15 thru 17, 20.5 cents. Dec. 6, inv. 58402.

Low Swift Soap Bid

Swift & Co., Los Angeles, submitted the low bid of \$1.53 on 1,100 gallons of toilet soap in a recent opening for miscellaneous supplies by the Quartermaster, Oakland, Calif. Dec. 27, inv. 54.

Climalene Cleaner Award

Climalene Co., Canton, O., received the award on toilet bowl cleaner with a low bid of 12 cents in a recent opening for miscellaneous supplies by the Federal Supply Service, Kansas City, Mo. Dec. 13, inv. 36346.

Federal Supply Awards

In a recent opening for miscellaneous supplies by the Federal Supply Service, Chicago, the awards on soap scouring compound went to the following low bidders: Dustbane Products Co., Chicago, item 1, 90 cents; Federal Chemical Co., Chicago, item 2, 5.9 cents, item 3, six cents, item 4, 5.9 cents, item 23, 12 cents; Colgate-Palmolive Co., Jersey City, item 5, 5-oz., 12.768 cents; Fitzpatrick Brothers, Chicago, item 6, 9.25 cents, item 8,

(Turn to Page 77)

Lavandalol



*A basic lavender fragrance especially
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NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany notice of opposition.

H—This for insecticides. Filed May 17, 1954 by Airosol Co., Neodesha, Kans. Claims use since March 18, 1954.

clean house—This for insecticide in cone form. Filed May 20, 1954 by George L. C. White, Los Angeles, Calif. Claims use since Dec. 10, 1953.

News—This for powdered cleanser for general household use, and certain commercial uses. Filed May 13, 1952 by Purex Corp., South Gate, Calif. Claims use since April 1932.

Sutton—This for soap in liquid, powdered and cake form, and foam bath preparations containing a detergent. Filed Jan. 15, 1954 by Sutton Cosmetics, Inc., New York. Claims use since Aug. 1, 1939.

T V Jr.—This for insecticide impregnated strips. Filed May 24, 1954 by Sarah-Worth Corp., Beverly Hills, Calif. Claims use since June 29, 1953.

Sable Sheen—This for shampoo. Filed March 29, 1954 by Joe J. Burnett, doing business as Burnett's Sable Sheen Mfg. Co., Birmingham, Ala. Claims use since Oct. 1, 1953.

Easy Task—This for sudsing cleaner, cleanser, and detergent. Filed May 18, 1954 by The Hewitt Soap Co., Dayton, O. Claims use since August 1887.

d-Con Ant-Prufe—This for insecticide. Filed June 24, 1953 by D-Con Co., Chicago. Claims use since Nov. 13, 1952.

Vet-X—This for insecticidal spray and deodorant for animals. Filed July 1, 1953 by Bridgeport Brass Co., Bridgeport, Conn. Claims use since June 10, 1953.

Cedaroma—This for household deodorant. Filed Aug. 3, 1953 by Kenrich House, Inc., Texarkana, Ark. Claims use since Sept. 13, 1952.

pfume—This for insecticidal and antiseptic vaporizer discs. Filed March 5, 1954 by Frank Zaretsky, doing business as Pfume, Chicago. Claims use since Sept. 1, 1953.

Frostex—This for insecticides. Filed May 6, 1954 by Lewy Chemical Co., New York. Claims use since April 16, 1954.

Aquatrol—This for water conditioner compound for rust and scale control. Filed May 26, 1954 by Aquatrol Laboratories, Inc., Clifton, N. J. Claims use since early in 1939.

Hurricane—This for insecti-

cides and fungicides. Filed May 26, 1954 by Re-Mark Chemical Co., Inc., Miami, Fla. Claims use since December 1952.

Red Arrow—This for insecticides, fungicides, and weed killers. Filed May 27, 1954 by McCormick & Co., Baltimore. Claims use since on or about Jan. 15, 1928.

Fly-Charmer—This for insecticides particularly useful for killing flies. Filed Aug. 26, 1954 by Pittsburgh Coke & Chemical Co., Pittsburgh. Claims use since Aug. 12, 1954.

Sheffield—This for shaving creams. Filed Dec. 8, 1953 by Sheffield Co., New London, Conn. Claims use since Jan. 21, 1937.

Imperial Leather—This for shaving soap, and shaving cream. Filed April 29, 1954 by Cussons, Sons & Co., Manchester, England. Claims use since Aug. 31, 1939.

Personal Choice—This for deodorant cream. Filed May 7, 1954 by Daggett & Ramsdell, Inc., Newark, N. J. Claims use since Sept. 22, 1953.

Nu-Beauty—This for hand cream. Filed May 19, 1954 by Holiday Co., Bedford, Va. Claims use since April 12, 1954.

Toxite—This for insecticide and disinfectant. Filed Oct. 22, 1953 by John U. Truslow, doing business as Toxite Laboratories, Chestertown, Md. Claims use since Nov. 12, 1931.

Softie—This for bacteriostatic textile rinse. Filed Dec. 28, 1953 by Marllyn Chemical Co., Calumet City, Ill. Claims use since Dec. 4, 1953.

Acritet—This for fumigant. Filed June 7, 1954 by Stauffer Chemical Co., San Francisco. Claims use since Sept. 28, 1953.

Trend . . . Neutral Beads—This for heavy duty industrial detergent. Filed Dec. 10, 1953 by Purex Corp., South Gate, Calif. Claims use since January 1950.

Project X—This for detergents for household, industrial and hospital uses. Filed April 22, 1954 by Industrial Soap Co., St. Louis, Mo. Claims use since March 10, 1954.

Bids and Awards

(From Page 75)

9.67 cents, item 11, 22.38 cents; Procter & Gamble Co., Cincinnati, item 7, 5.87 cents; Chicago Sanitary Products Corp., Chicago, item 9, 6.5 cents; John T. Stanley Co., New York, item 10, 22 cents; Davies-Young Soap Co., Dayton, O., item 12, 8.5 cents; Marjo Products, Chicago, item 13, \$2.20; Stahl Soap Co., Brooklyn, item 14, 10.67 cents; Buckeye Soda Co., Painesville, O., item 15, 10.5 cents; Washington Chemical Sales, Washington, D. C.,

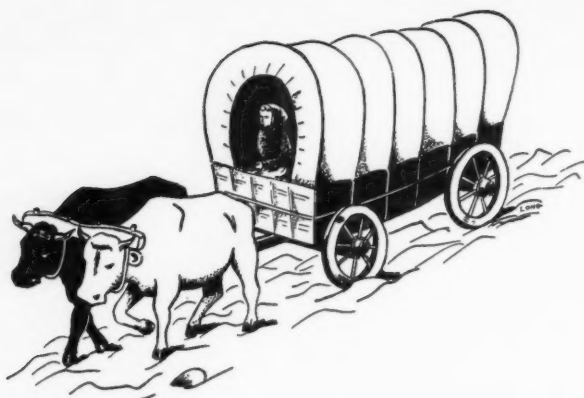
item 16, five cents, item 17, five cents; Crowley-Thompson, Cleveland, item 18, \$12.25 cwt; Johnson Chemical Co., Catonsville, Md., items 21 & 22, 11.97 cents; Blockson Chemical Co., Joliet, Ill., item 24, 4.9 cents. No awards made for items 19, 20 and 25. Nov. 23, inv. WCH-78440.

FSS Soap Awards

In a recent opening for miscellaneous supplies by the Federal Supply Service, Dallas, the awards on soap went to the following low bidders: Gem Products Co., Dallas, item 1, 4,800 pkgs., 21 cents, item 3, 9,600 cans, 9.8 cents; Gillam Soap & Chemical Co., Fort Worth, item 5, 132,000 lbs., 6.48 cents for 102,000 lbs.; Lever Brothers Co., New York, item 4, 60,000 lbs., 8.21 cents, item 6, 50,000 lbs., 8.39 cents; Ni-Late Mfg. Co., Atlanta, item 8, 7,200 lbs., 11 cents; Nowlin Co., Fort Worth, item 7, 60 ctns., 74 cents; City Chemical Co., New York, item 14, 1,824 ctns., 16.5 cents; J. Eavenson & Sons, Camden, N. J., item 11, 1,100 cases, \$4.25 cents; Gem Products Co., Dallas, item 12, 11,000 ctns, 38 cents; Gold Par Products, New York, item 15, 900 lbs., 14.2 cents; Pacific Coast Borax Co., Los Angeles, item 13, 4,000 ctns, 57.75 cents; Swift & Co., Fort Worth, item 9, 150 cases, \$14, item 10, 100 cases, \$9.99; Valley Products Co., Memphis, item 5, 132,000 lbs., 5.65 cents for 30,000 lbs. No award made for item 2, 30,000 blocks. Nov. 17, inv. 39398.

New du Pont Secretary

Pierre S. du Pont 3d has been named secretary of E. I. du Pont de Nemours & Co., Wilmington, Del., it was announced recently. He succeeds Lamot du Pont Copeland who has been elected vice president and chairman of the firm's finance committee. With the company since 1934 Pierre S. du Pont 3d is a son of the late Lamot du Pont, former president and chairman, and a great-grandson of E. I. du Pont de Nemours, founder of the firm.



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	Cottonseed and Soybean	
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Titre	8° — 10°C.	3°C. max.
Cloud Point	46° — 49°F.	38°F. max.
Color 1" Lovibond Red	2 max.	2 max.
Color 1" Lovibond Yellow	15 max.	15 max.
Unsaponifiable	1.5% max.	1.5% max.
Saponification Value	198 — 203	198 — 203
Acid Value	197 — 202	197 — 202
% F.F.A. as Oleic Acid	99 min.	99 min.
Iodine Value (WIJS)	93 max.	96 max.
Refractive Index 50° C. (Average)	1.4495	1.4505

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JANUARY, 1955

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White Curd Soap Making

CURD soap must be white to sell in today's market. Raw materials required for whiteness, such as best tallow and distilled fatty acids, are expensive. Moreover, many batches incorporating the most costly raw materials fail to turn out white. Outmoded equipment and ignorance of the nature of raw materials are often to blame. Some ways to overcome the most commonly encountered difficulties are presented below.

The simplest way is to start out with the very best grade of tallow. A small sample should be subjected to a color stability test by saponification in the laboratory. If no change of color occurs, it is reasonably safe to assume that a larger batch will also remain white. Frequently such fats are put through an extra refining process which can be done in any clean vessel with very little trouble.

For further improvement, the entire batch can be freed from all mechanical impurities by passing through a centrifuge prior to boiling. A perfectly white soap equivalent to anything turned out by the most modern plant can be made by refining with caustic lye and separating the off-color soap from the liquid fat in the centrifuge. Unfortunately this method involves great losses even if the dark soap were to be used in a boil of yellow curd soap. It is feasible only in a small plant which is able to procure sufficient quantities of butcher's tallow in exchange for soap products. However, tallow originating from such a source, must be sorted very carefully. The minutest quantities of burnt fat, caused by careless rendering, greatly influence the color of the final product. Crack-

lings and the slimy bottom layer, commonly present in such material, must be completely removed to avoid discoloration and rancidity in the finished soap. These observations explain the ever growing importance of the centrifuge as part of the soaper's equipment.

Parenthetically, it should be remembered that hardened fats also yield white soaps. Usually less expensive than best tallow, they can be used to make the soap charge more economical. Because these fats are traded according to titer, the user can adjust the proportions of soft to hard fats so as to preclude difficulties in the mechanical handling of the charge.

Because it is not possible to procure enough butcher's tallow to feed a medium sized soap plant, the above described procedure must be confined to the small soaper. Medium-sized factories are consuming increasing proportions of distilled fatty acids, which give rise to certain difficulties. Two batches, composed of identical ingredients may turn out to be of completely different color, even if they are processed with the greatest care, which is taken for granted all the way through this study.

Inadequate Equipment

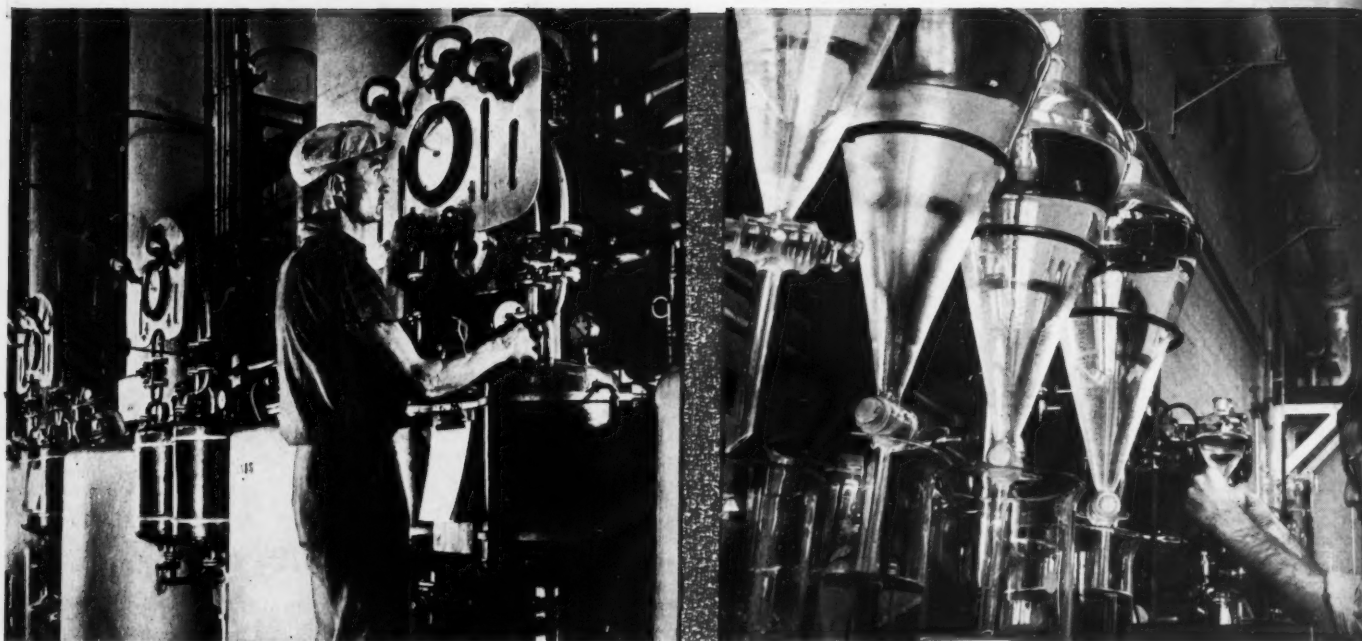
INADEQUATE equipment in most average size plants largely explains these discrepancies. Frequently distilled fatty acid is stored in iron containers, in which it may be discolored by iron compounds. The degree of discoloration varies with the temperature. Welded seams and joints in pipe lines, where comparatively large amounts of rust accumulate, are frequent sources of discoloration. If the fatty acid en-

ters the kettle in an excessively strong stream a large proportion of the material comes into contact with the iron kettle wall and the color will suffer. Even bleaching with sodium hyposulfite cannot cure the resulting trouble. Sodium hyposulfite is widely credited with ability to compensate for inadequate machinery; this however is not always true. Even large additions of this bleach do not yield results equal to those obtained with the use of glass equipment. Sodium hyposulfite is a good bleaching agent, but no soap batch has ever been freed from iron contamination by additions of this agent. It succeeds up to a point, but frequently permits the soap to darken rapidly in storage.

The color of the final product is greatly influenced by composition and quality of the raw materials before distillation. Waste tallow or bone fat rarely yield pure white distillates. Although the finished soap may be light initially, subsequent darkening is the rule. If such a batch is worked with iron equipment the resulting soap will only be pale yellow by modern standards.

The use of aluminum tanks and pipe lines of suitable material is essential from a technological point of view. At least storage tanks and kettles must be ceramic lined. Continuous checking of pipe lines is imperative and old iron pipes with numerous welded patches and rust accumulations must be discarded in favor of new pipes of correct material. Such a policy is the prerequisite for the manufacture of truly white soap. Any initial costs it may cause will soon be amortized by economies in the use of bleaching agents and by fewer

Givaudan aromatics—keystones of progress in soap perfumery



The tremendous variety of Givaudan aromatics is the result of a long and successful research program designed to isolate and synthesize the perfumes of nature in laboratory and factory and to add new aromatics unknown to nature. Constant improvement in production methods has made them the standards by which chemical purity and olfactory quality are measured. Listed below are a few from the hundreds of these Givaudan "keystones of progress":

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Cinnamic Aldehyde, Alcohol & Esters
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Cyclamen Aldehyde
Dimethyl Anthranilate
Geraniol and Esters
Heliotropin
Hydroxycitronellal (Laurine®)
Indole

Ionones (Irisones)
Isobornyl Acetate
Linalool and Esters
Methyl Ionones (Raldeines®)
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To produce pure white curd soap, distilled and redistilled fatty acids must be used separately. Heating of the distillate is to be avoided so as not to impair finished soap's color.

complaints and returns on the part of customers.

Commercially available distilled tallow fatty acids are often of unknown composition and thus constitute a risk. Intelligent manufacturers seek to eliminate this risk by mixing their own fat charges and distilling the individual components or the whole charge, in the belief that this guarantees a uniform product. This however is not always true. Some experience in the field of distillation technology is necessary to analyze reasons for deviations.

It is impossible to go into this subject at length here, beyond offering one rule of thumb: materials must not be exposed to elevated temperatures for extended periods. A high vacuum still answers this postulation ideally while giving the highest yields.

Splitting Operation

THE splitting process is also worthy of meticulous attention. The lower the degree of splitting, the larger the residue left after distillation. This residue may be split again but is a comparatively difficult operation. If performed with outmoded apparatus, the degree of splitting will be low and greater losses in fat will occur than with a modern plant. This loss increases the overall cost of raw materials. The second distillate is always darker than the first. If the two distillates are processed separately, the first for white curd soap, the second for yellow, the loss in value of the second distillate must be calculated in the price of the first, which is rarely practical. However, from a mixture of the

two distillates no truly white soap can be made, only the off white grades, at best. Colorimetric examination shows the color of the mixture to approach that of the second distillate.

The belief that iron contamination is the only cause of color deterioration is entirely mistaken. All storage means deterioration. Only where the hot distillate can immediately be conveyed to the kettle and saponified will perfect results be achieved. This is where plants having their own distillation equipment have an edge.

Exposure of the distillate to heat impairs whiteness, increases the red and yellow values and decreases the blue, as has been shown in numerous experiments. This, incidentally, is the reason why a mixture of the two distillates shows such color deterioration. A satisfactory mixture is achieved only when heat is applied.

The soaper whose operation does not include a still must use fatty acid which has been conveyed to his plant by tank car immediately after distillation. He must saponify it immediately upon arrival. This procedure is his only reasonable way to make a competitive product. Renewed storage of the distillate, even in suitable containers, leads to inferior color of the finished soap. Obviously the soaper should not buy in excess of his immediate processing capacity. Any savings in freight resulting from bulk transportation are offset by devaluation of the soap.

Constant liquefaction of the fatty acid during processing may be caused by storage in poorly located tanks (above kettles f.i.) or by leakages in the indirect steam

system. A distillate exposed to such conditions soon becomes unsuitable for anything better than yellow soap. Under such circumstances all the fatty acid should be saponified at once and stored in the form of slabs. However this method, though very costly, is used frequently.

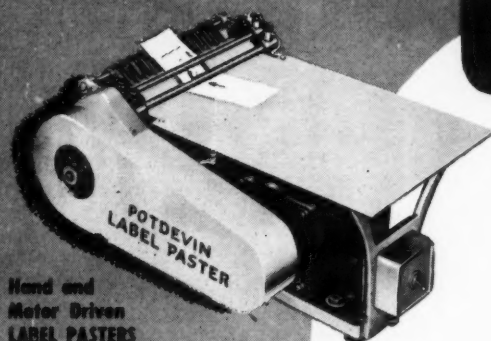
The soap is boiled, bleached and salted out in the usual manner. The next question to be answered is whether color can still be modified after the soap has left the kettle. Some soapers perform another bleaching operation in the pressure chamber of the cooling press. This procedure is usually guarded as a secret: for every 1000 kilos of soap a mixture of one kilo of perborate and three kilos of waterglass are added to the soap mass at 80°C. The initial result is really amazing: the soap is greatly brightened. The disadvantage inherent in this method does not appear until later. Countless oxygen bubbles honeycomb the otherwise clear soap paste, causing light refraction effects which increase whiteness. But at the same time a change in specific weight takes place, and the weight of the bars ceases to be uniform. Under unfavorable conditions differences may be so great that they lead to numerous complaints. Perborate and its effects are familiar from the days of floating soap: the bubbles reduce plasticity and may cause such brittleness in the soap that it tears easily in stamping. Moreover, a thin film may form on the soap surface during storage. Doubtless, there are means to overcome some of these deficiencies. But in the end such soaps have a dead look, and lack typical transparency on their edges.

Another method of bleaching soap in the pressure chamber of the cooling press at the same time effects extensive neutralization of the soap. (E. Rost, German patent 671, 332). For every 1000 kilos of soap, a mixture of 1.5 kilos of boric acid with 100 grams of a polyvalent aliphatic alcohol, preferably mannitol, is added. Mannitol can be replaced by tartaric

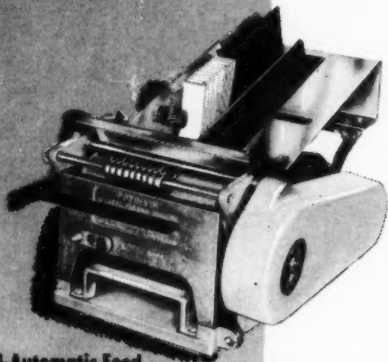
it takes a **PRO**
TO SOLVE A LABELING PROBLEM!

POTDEVIN LABELING MACHINES

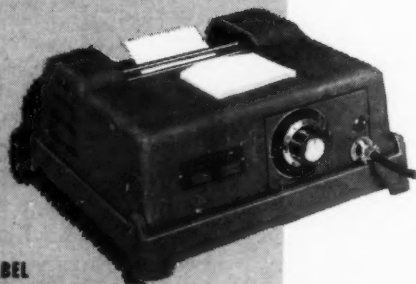
*are used in more plants
than any other make*



Hand and
Motor Driven
LABEL PASTERS



Semi-Automatic Feed
LABEL PASTERS



LABEL
ACTIVATORS For
Thermoplastic Labels

In the Soap and Sanitary industry the name POTDEVIN is a synonym for a quick, economical solution to any labeling problem. More than 60 years of proven design experience has resulted in a complete line of standard and custom-built equipment to meet any labeling requirement.

On this page several of the many POTDEVIN standard machines are illustrated. These are particularly suited for short-run production or for auxiliary use so as not to disturb a mass production equipment set-up. They are available on a **FREE TRIAL**. Write for literature and details on the complete POTDEVIN line.

Hand and Motor Driven LABEL PASTERS

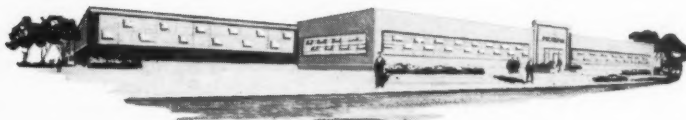
Highly versatile, handles any shape label without adjustment. Dial control regulates paste flow, eliminating excess. Cuts stock loss. One machine can supply several operators. Available in 6"-8½" models.

Semi-Automatic Feed LABEL PASTERS

Quickly adjustable to all shapes of labels, from ½" to 7½" wide. Dial regulates paste flow. Speeds production up to 50%. Suitable as auxiliary unit in mass production operation. Leaves mass production equipment undisturbed.

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Activates delayed tack, pre-coated labels quickly and evenly. Permanent labeling on glass, metals, plastics, fabrics, etc. No water or glue to smear product. Thermostatic heating control. Small and portable. Available for 6" and 12" widths. Motor driven.



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prevents coating materials from adhering to the walls of pots, tanks, rollers, shafts, feed tables and other exposed surfaces.
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256 North Street

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SOAP and CHEMICAL SPECIALTIES

or citric acid (protected by a supplementary patent). It must be remembered, however, that borax makes the soap brittle.

Use of Dyes

AN already white soap can be further improved by bluing. A solution of approximately 0.01 percent ultramarine blue in a 10% tylose (cellulose ether solution) or small quantities of "Blankophors" and other optical bleaches of bluish cast can be added for this purpose. But bluing cannot make a yellow soap white.

A French method (French patent 883, 435), based on the same principle, recommends addition of 0.01 percent of a fluorescent compound (green-blue, blue, or violet-blue) such as the sodium salt of 4'4'-bis (2-oxy-4-phenylamino-1,3,5-triazyl (6)-diamino-distilbenedisulfonic acid-2,2').

Careful and correct dying of soap with titanium dioxide can produce good results. To dye 100 kilos of soap, up to 50 grams of titanium dioxide may be needed. The TiO_2 is stirred into a multiple quantity of a five percent tylose solution. This mixture is passed through a fine sieve and then further diluted with a 10 percent potash solution for better distribution in the soap mass. Vigorous and prolonged stirring is essential when the solution is introduced into the pressurized kettle. Many faults may develop in dyed soap. The bars may have a streaky look which the public attributes to the presence of extenders. Such bars won't sell. Excessive alkalinity may be one reason or salting out at too high viscosity. "Thin" graining will avoid this undesirable formation of crystals. The presence of titanium white gives the soap a dead appearance. This can be cured by an addition of TL4N (a polyglycol compound). The soap surface may turn rough after a period of storage. This means that not enough tylose was used in the TiO_2 /tylose solution. The proportion should be one kilo of TiO_2 /10 kilos of an at least five percent tylose solution. The pres-

ence of this combination goes far towards prevention of subsequent soap discoloration.

Frequently, a soap batch may leave the cooler in beautiful white slabs only to turn yellow a day or two later. To prevent this subsequent darkening 0.1 to 0.2 percent sodium thiosulfate can be added to the soap while in the pressurized kettle. Recommended is an aqueous solution which is further diluted with a ten percent tylose solution. This achieves rapid and even distribution of the additive in the soap mass. The solution must be added slowly, after having been slightly heated, so that it is taken up immediately by the soap. Incorporation of the thiosulfate solution must be followed at once by cooling of the soap. Batches, previously bleached with Blankit because of the presence of iron, and subsequently treated with thiosulfate may show bluish patches when the slabs are cut. But these disappear after brief exposure to light and a good white color remains. Thiosulfate does not prevent the yellowing of soaps containing a predominant proportion of bone fats.

Summary: In the manufacture of pure white curd soap distillate and redistillate must be used separately. All heating of the distillate should be avoided as far as possible because it impairs the color of the final product. Further brightening of the soap in the pressurized kettle of the cooling press by the use of oxygen yielding compounds is rejected. Dyeing with TiO_2 is feasible if the soap is grained "thin" and sufficient quantities of tylose solution are used. Addition of TL4N is recommended in all cases because it increases transparency around the edges and improves the foaming properties of the soap. Additions of blue or bluish fluorescing dyes improve the color of soap which is already white. Sodium thiosulfate will, in certain cases, prevent subsequent darkening and protects the soap against rancidity.

Heinz Zilske, *Seifen-Öle-Fette-Wachse*, N. 21/1954, pp. 548, 9 and N. 22/1954, p. 585.

Westvaco Phosphate Plant

Westvaco Mineral Products Division, Food Machinery and Chemical Corp., New York, completed recently the first plant for the production of sodium hexametaphosphate on the West Coast at Newark, Calif. The new facility has a capacity in excess of 12 million pounds per year in various forms, including powdered, granular, flake and "plates." Westvaco Mineral Products Division also operates a hexametaphosphate plant at Carteret, N. J. Sodium hexametaphosphate made at both plants is marketed under Westvaco's brand names "Hexaphos" and "Hexofodril."

Kellogg Research Head

Malcolm M. Renfrew has been appointed director of research and development for Spencer Kellogg & Sons, Inc., Buffalo, N.Y., it was announced last month. Dr. Renfrew succeeds Dr. Alexander Schwarzman who established the Spencer Kellogg research laboratories over 40 years ago. Dr. Schwarzman remains active in the company management in an advisory capacity.

Dr. Renfrew was associated with General Mills Inc., Minneapolis, for the past five years and with E. I. du Pont de Nemours & Co., Wilmington, Del., for the preceding eleven years.

At the same time, Spencer Kellogg announced completion of plans for the construction of a new half million dollar research center in Buffalo. Scheduled for completion in April 1955, the new project will consist of a main two-story laboratory building and a one-story pilot plant unit. The laboratory will be equipped to handle basic and analytical research.

Hooker Plant Diversifies

Hooker Electrochemical Co., Niagara Falls, N. Y., recently announced that its new plant at Montague, Mich., has added evaporation equipment for the manufacture of 73 percent caustic soda, in addition to 50 percent caustic, as originally planned. A 1½ million

BIG

PROFIT OPPORTUNITY IN LIQUID DETERGENTS



STEPAN Complete Line of Liquid Detergent Bases Helps Soapers Cash-In

From heavy-duty floor cleaners to bubble bath specialties . . . from textile scouring compounds to milady's creme shampoos, there are Stepan liquid detergent bases and finished formulations available to help you develop your own product.

Included in the Stepan line of liquid detergent base materials are the new higher fatty alcohols and fatty alcohol sulfates important for superior detergency and mildness to the skin in such products as liquid dishwashing detergents, heavy-duty household detergents and other detergents in either liquid, solid, or flake form.

The completeness of the Stepan line of base materials makes it possible for you to select just exactly the correct ingredients for blending to your use and price requirements.

Why not let Stepan materials, facilities, and experience help you to capitalize on the big and growing liquid detergent market?

Liquid Alkyl Aryl Sulfonates

The Stepan line includes a variety of liquid alkyl aryl sulfonates offering economical sources of active ingredients and tailored to meet various price and end use requirements. Among these products and of special interest are DS-60 and DS-35 de-salted sodium alkyl aryl sulfonates. In addition to their uses as a liquid dishwashing detergent base, these products are ideal as bases for scrub soaps, dairy cleaning compounds, or any other cleaning compound which requires the combination of economy, superior detergency, and superior wetting action.

Non-ionic Detergents and Foam Stabilizers

Stepan LDA, an alkylolamide, provides exceptional foam sta-

bility and is highly recommended for use in alkyl aryl sulfonate and fatty alcohol sulfate formulations where high foam stability is desired.

Amides—Stepan can also produce special amide type non-ionics to your own specifications. Our large production capacity may well effect important savings to you on products of this type.

Sulfated Alcohols

Lauryl Sulfates—An extremely wide range of sodium, ammonium, potassium, and triethanolamine lauryl sulfates are available for detergent and other uses. These are obtainable in paste, liquid, or powder forms and are unmatched for purity and uniformity.

Higher fatty alcohol sulfates—These new products in the Stepan line offer excellent detergency and

20.2% of the market in four years is the record for a liquid dishwashing detergent in one major city. It now outsells all other dishwashing products in that market. Synthetic detergents as a whole have captured better than 50% of the market, nationally. Stepan Chemical Company has a complete line of liquid detergent bases and finished formulations to help soapers profit from this growing market. Many of these base materials are also advantageous for use in solid, flake, or paste form detergents.

the additional advantage of low de-fatting to the skin. They are ideal for use in shampoos, heavy-duty household detergents, and other detergents in liquid or solid form.

Savings Through Stepan Blending Service

The completeness of the Stepan line can also make possible consolidated raw material buying. This, in combination with Stepan's extensive blending facilities, can effect important savings for you.

Carload total of less than carload ingredients, where suitable, can be blended at small additional cost and carload price savings effected on the individual items.

Laboratory Assistance

The Stepan Chemical Company has had over twenty years experience in the field of synthetic detergents. This experience and the new Stepan laboratory facilities are available to help you in developing and producing your detergent product.

Write for Free information and Samples...

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CHEMICAL CO.

20 No. Wacker Drive
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gallon caustic storage tank has been erected near the plant and docking facilities on adjacent White Lake have been installed.

As Reader Sees It (From Page 31)

vision, I inherited a Miss Marie Dubin, who worked for two of my predecessors, Carl Schwank and Sox Newman. It was my pleasure during my six years with that concern to work with Marie Dubin—one of the top producing salespersons (male or female) in this country. She is still pounding the streets of Philadelphia.

In 1940, I hired Wilma Gemmill, who worked for a short period of time in Philadelphia for training and was then transferred to our New York office. While there, she was always a top-producer. Wilma is still engaged in sales work in Philadelphia, and in recent years, I have engaged her on a consulting basis several times. A top-flight worker and producer, she left Hollingshead in 1947.

During 1942, I employed seven women as industrial housekeepers, located in North Jersey and Metropolitan New York. Actually, they were all sales people for Hollingshead. This effort was abandoned in 1943, when raw material shortages and priorities caught up with us.

We'll date women in sanitary supply *selling*—on the streets, in the basements, all over the place, back to 1930.

Bill Plowfield

Bill Plowfield and Associates,
Philadelphia

* * * *

The "news" referred to by Mr. Plowfield was the subject of an editorial in the November issue of SOAP. While we mentioned the sanitary chemical field, we probably should have confined it to the sanitary supply jobber or distributing field. All of the instances Mr. Plowfield cites, of course, deal with sales women for sanitary chemical manufacturers. Possibly there have been sales women for jobbers before. If so, we'd like to hear about them. Think back, real hard, all of you old timers. Ed.

Seeks Sanitary Suppliers

Editor,

You will note from your records that the writer, through his company here, has been a subscriber to "SOAP" for somewhat more than 20 years.

We have, however, in spite of the dollar shortage, been able to continue importing some special products from U.S.A., and as you will understand, we had to have resource to dollars for the importation of carnauba wax, pine oil, Mathieson's H.T.H. and a number of other commodities.

I will, however, be spending between 8 and 9 weeks in U.S.A., after I land in Vancouver about 14th February next, and before I leave New York about 19th April next. During that time, I will be visiting Dow International, Mathieson Chemical Corporation at Baltimore and at New York, Hercules Powder Co., and others with whom we have had a relatively long business association.

We are agents for Mathieson's H.T.H., in Australia and in N. Z. and they have also instructed us in respect to the sale of some of their other products.

We are also agents for Dow wood preserving chemicals in N. Z.

We do, however, specialize in what you call, and what we also call "janitorial supplies," and so when in America, I would like to meet the manager of at least one company who is similarly interested.

The main purpose of this letter is to ask your advice of the name or names of one or two companies, who specialize in "janitorial supplies," and who are located in Baltimore, New York, or within some hundreds of miles of those cities, who you think might have some interest in meeting me, with the possibility of us doing business with them.

I will have only a limited period in Chicago, and as I cannot very well call upon people in U. S. A. who are engaged in similar business to ourselves, without the reasonable possibility of us being able

to purchase from them, I think it better that I make such calls upon companies who are located fairly close to shipping ports.

The writer is fully aware, of course, that as the manager of a janitorial supply company who proposes to call upon managers of similar companies operating in U. S. A., that I should not have any naive or deliberate purpose of trying to collect information at the expense of the people upon whom I propose to call.

You would be aware, however, that although we may not reach convertibility of sterling with the dollar in the near future, that there are good possibilities of freer trading conditions developing, and the writer certainly plans to take whatever advantages we are able to take, of those conditions when they come about, or as they progressively develop.

Our working capital, or in other words, Shareholders' Funds, exceeds £100,000.

We employ 20 salesmen working a territory of just about 2,000,000 population, and our turnover exceeds £300,000 per annum.

S. W. Peterson & Co. Ltd.
165 Vivian St.,
Wellington, New Zealand

* * * *

We are glad to publish Mr. Peterson's letter in case any manufacturers or distributors would like to contact him during his visit to the U. S. Ed.

— * —

Rad's Not Swift's

Editor:

I am concerned in noting on Page 18A of your December, 1954, issue a two paragraph article entitled "Swift Offers New Syndet."

This article is erroneous in that the sale and distribution of this product is directed exclusively by North American Distributors, Inc., Milwaukee. "Rad" is a granulated soap, processed under a special formula for use in both wringer type and automatic washing machines.

W. N. Roth, president
North American Distributors, Inc.
Milwaukee

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Marchon

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ALKYL ARYL SODIUM SULPHONATES

based on
tetrapropylene polymer

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brand



*** NANSAS H.S. FLAKE**

*80% dodecyl benzene
sodium sulphonate*

*** NANSAS S. POWDER**

*40% spray dried dodecyl
benzene sodium sulphonate*

*** NANSAS LIQUIDS**

*built alkyl aryl sodium
sulphonate liquids*

*** NANSAS U.C. POWDER**

*bead type totally spray dried
synthetic detergent containing
molecularly condensed phosphates,
carboxy-methyl-cellulose,
silicates, foam builders
etc.*

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ORGANIC DIVISION: Fatty alcohol sulphates (EMPICOLS), emulsifiers (EMPILANS), self-emulsifying waxes (EMPWAXES), alkyl aryl sulphonates (NANSAS) and other detergent bases, additives and emulsifiers in powder, paste and liquid forms.

INORGANIC DIVISION: phosphoric acid and complex phosphates.

PRODUCTION *Clinic*

By **E. G. Thomssen, Ph.D.**

DURING the recent holiday period we have all extended and received the greeting, "Happy New Year", many times. While we are wont to wish the other fellow happiness more frequently and with greater sincerity at the outset of a new year, we are apt to overlook ways to make him happy and satisfied every day of the year. This applies particularly to keeping factory employees contented all the time they are at work.

It is very disconcerting to one in charge of production to have workmen quit because they are dissatisfied with their jobs. Equally irritating is the managing of a plant when employees, upon whom one is dependent for smooth, continuous operations, absent themselves. This is especially annoying when the production schedule calls for a very high output.

To insure against absenteeism of this sort, it is important to consider what can be done to raise the morale of workers so that they can find happiness and satisfaction in their daily work.

Discontent on the job, often resulting from some trivial incident, can be a major cause of absenteeism. Satisfied employees work at their jobs with greater regularity and for longer periods than dissatisfied workmen. The employee who absents himself rarely is usually cheerful, contented and adaptable to performing more than one kind of work. He is generally popular with his fellow workers. Those with high absentee records are for the most part discontented, unhappy, irritable and unable to get along well with their fellow workers. They usually do poor work and stir up dissension whenever possible.

To discover what ails the latter type of employee and how to overcome these shortcomings re-

quires a thorough investigation. In many cases griping may be caused by ill health.

Family troubles, lack of economic security (real or imagined), improper recognition of job status, low pay or a mild psychosis frequently are at the root of these personality disorders. It is imperative that management, the personnel director, physician or factory superintendent be consulted to determine the causes of poor adjustment on the part of the factory employee. The diagnosis and correction of the unsatisfied basic needs can be well worth the expense.

Production men are realizing more and more that proper job placement of a new employee entering an organization, must be done very carefully. To place an individual in the type of job for which he is best fitted requires painstaking effort, but eliminates personnel problems later on. Too often, men and women are employed to do work that is distasteful to them. The longer they are on the job, the greater their dissatisfaction. Union membership makes it extremely difficult to discharge malcontents and even moving them from one classified department to another is not easy. It is well,

Dr. Thomssen



therefore, to select, then follow up, to detect any errors made in placement during the probation period so that a suitable position is found for the most adaptable man or woman. Haphazard employing of a new man or woman is a mistake.

Closely allied to this problem of absenteeism and high personnel turnover is that of keeping employees satisfied with their jobs and boosting their morale, as well as increasing their loyalty to the company.

Employee relations are handled differently in different plants. Smaller plants have different problems from large companies and thus require employee relations programs peculiar to their size and methods of operation. Being smaller they have the advantage of being in more intimate personal contact with their employees and their problems than the management of large firms. Production executives in small plants learn of the employees "gripes and beefs" more readily and faster than the large plant manager. Then, again, the type of work carried out by the manufacturer and the employee himself influence the methods used to keep a plant more harmonious.

I remember clearly an early experience in a plant in which music and jokes were used to boost the morale and increase the efficiency of a large force of employees who were carrying out the same tedious operation, hour after hour. Entering the workroom one heard music, laughter, talking and singing. I was astounded at what appeared to be the disorder and general lack of discipline and mentioned it to my guide. I pointed out to him that in most factories, at that period, employees were hardly permitted to talk to one another. He laughed and took me over to the plant superintendent, who explained that before the company provided entertainment for its help it had a great deal of trouble with its labor force. The adoption of the present procedure, he told me, had greatly increased the efficiency of the em-



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WHERE: Anywhere in New England, the Middle Atlantic States, the Midsouth, the Ohio Valley and the heart of the Mississippi Valley . . . give or take a few miles here or there due to the peculiarities of freight rates.

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You'll like our combination of "small company" service and "big company" production efficiency. Why not let us quote on your contract or spot requirements?



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ployees by breaking the monotony of the work. The suggestion that entertainment be provided had come from an employees' guidance committee. The company employed a professional entertainer who sat where all the table workers could see him. Every so often he would sing, play music or tell jokes. The employees did their work so automatically that the diversion in no way affected its quality but acted to increase output.

A bugaboo in many plants has been the question of smoking during work hours. On the job smoking is considered an obstacle to proper discipline in those plants where it is *verboten*. All of us who have had plant experience know that when the urge to have a smoke asserts itself, the working man is going to have a few puffs whether or not it is banned. Plant managers realize more and more that it is advisable to permit smoking where fire hazards do not dictate otherwise. I have known of several serious plant fires that were started by an employee sneaking a puff, but none where smoking is permitted. A recent survey made among firms regarding the question of unrestricted smoking by both men and women at work showed an increase of 50 per cent in favor. The main reason for this increase is that it reduces the nuisance of employees constantly stealing off to out of the way places or to the washroom to satisfy the craving for a smoke. In the majority of cases production has increased as the bans on smoking are lifted.

Unusual and increasingly popular devices to keep employees happy on the job employed quite generally these days include piped in music ("Muzak"), radio programs, colorfully decorated workrooms, (often provided with fresh flowers), better and more attractive lighting and lighting fixtures and snack carts that circulate from time to time among employees. These are in addition to such incentives as profit-sharing, old age security and the right to put forth grievances

without fear of reprisals.

A Happy New Year, then, should mean a happy working day every day of the New Year to every employee in order to run an efficient plant.

Industrial Thermometers

PRECISION Thermometer & Instrument Co., Philadelphia, recently announced a new line of five inch scale, mercury-in-glass industrial thermometers, with separate sockets. Designed specifically for restricted-space applications, these thermometers are offered in a choice of five different case angles: straight, 90° rear angle, 90° right and left side angles, and 135° oblique angle. There is also a choice of five different scales: -40 to 110°F., 30 to 180°F., 30 to 350°F., and 200 to 500°F.

A feature of these new thermometers is the separable socket, or well. Aside from the obvious protection for the thermometer bulb against process conditions, a separable socket permits the thermometer proper to be removed, if necessary, without leaving an opening in the line or other apparatus. These sockets are threaded for both 1/2" and 3/4" N.P.T. Sockets are furnished in brass, steel and stainless steel. Two different stem lengths are available. Conducting medium between the inner wall of the stem and the thermometer bulb is powdered aluminum.

Further information may be obtained from Precision Thermometer & Instrument Co., 1434 Brandywine St., Philadelphia 30, Pa. Request Bulletin E-2

Power Pallet Stacker

THE Raymond Pallet Stacker originally designed to plug into an electrical outlet is now offered with a 12 volt battery operated, lifting motor and automatic built-in charger. Two batteries are wired in series to provide the 12 volt current. Batteries can be charged during off duty periods to keep the unit ready for a full eight hour shift operation.

Designed to lift and stack 2000-lb. pallet loads, this stacker has adjustable base forks that will straddle all popular size pallets. Lifting forks are also adjustable in width and can be furnished in lengths of 36 or 40 inches.

The stacker is positioned manually and a fifth wheel steering arrangement provides exceptional maneuverability. It is especially useful in temporary storage areas, outside warehouses and open areas where electric service is not available.

Control Hoods

THE Lennard transparent "Control Hoods" were designed for work involving radioisotopes or bacteria and for use in the critical assembly of delicate instruments. They have been developed to provide industry and research with a low cost, portable environmental housing which will maintain controlled atmospheres of sterile, dry or radio-active dust-free air. They provide conditions free from the danger of radio-active or poisonous contamination or hazards to the worker from minor explosions. The hoods can be hermetically sealed in 30 seconds. The "Control Hoods" have proved of inestimable value to private industry. The standard hoods are 36 x 24 inches and weigh less than 1/10 steel. P. M. Lennard Co., Brooklyn 38, N. Y. builds these hoods.

New Humidifying Unit

Spraying Systems Co., Bellwood, Ill., has just announced a new humidifier for use in small rooms and enclosures, where small capacity units are desirable. Designated as No. 6110 Humidifying Unit, this equipment provides full-range humidity adjustment for rooms up to about 12,000 cubic feet in size. Spraying systems also makes large capacity units.

The No. 6110 consists of two 1/4-JH humidifying nozzles and water supply tank with float valve. Accessory equipment supplied as needed to complete installation in-

For Whiter, Brighter Washing THE KEY IS CMC

Dirt particles are *always* removed with the rinse water; *never* redeposited on the clothes when Hercules® CMC is included in a detergent or soap formulation. The unusual soil-suspending properties of CMC mean that a cleaning agent can concentrate on the job of loosening dirt; can count on CMC to see that the dirt stays out.

Colgate-Palmolive's new FAB, an all-purpose detergent, relies on CMC to help it fulfill its promise of "cleaner, whiter, brighter clothes because FAB washes out dirt and leaves no dulling soap scum." And when it comes to dishes, FAB can boast of shiny dishes, just by soaking, with "no washing, no hard scouring and no wiping needed."

Many commercial laundries and leading manufacturers of cleaning agents have discovered the value of economical CMC. To explore the possibilities CMC may hold for you, write for technical information and testing sample.



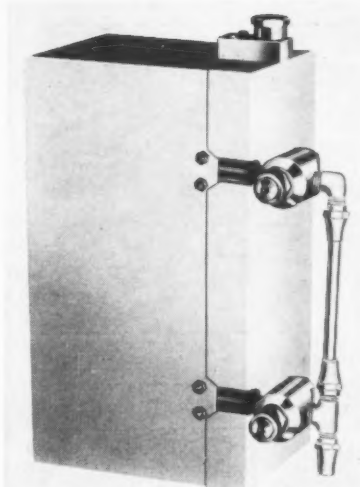
Manufactured by Colgate-Palmolive Co., new FAB is available in three convenient sizes. Mild to hands, it is recommended for everything from work clothes to fine washables.



Cellulose Products Department
HERCULES POWDER COMPANY

961 Market St., Wilmington 99, Del.

CM54-14



New Spraying Systems Co. No. 6110 two-nozzle humidifying unit. Specially designed for smaller rooms and enclosures up to about 12,000 cubic feet in size. Now available along with larger Spraying System humidifiers and equipment for complete systems, to give selection to meet all needs.

cludes humidistat, air filter, air pressure regulator and solenoid valve. Operation is by compressed air . . . to siphon water from the supply tank and for projection and atomization of the spray. At the recommended operating pressure of 32 pounds per square inch, the unit will atomize water at the rate of two gallons per hour and use 2.9 cubic feet of air per minute.

Complete information and installation diagram is available in Data Sheets 6110 and 6111 from Spraying Systems Co., 3217 Randolph Street, Bellwood, Ill.

New Oronite Unit

Oronite Chemical Co., San Francisco, will manufacture detergent alkylates in conjunction with British Petroleum, Ltd., it was announced recently by Sir Henry J. Ross, chairman of Distillers Co., Ltd., British Petroleum's parent company. A new plant is to be built at Grangemouth and operations are expected to begin before the end of next year. A new firm, named Orobis Ltd., has been formed by Oronite and Distillers Co. to manufacture at Hull the range of oil additives made by Oronite in the United States.

Safety Appliances Catalog

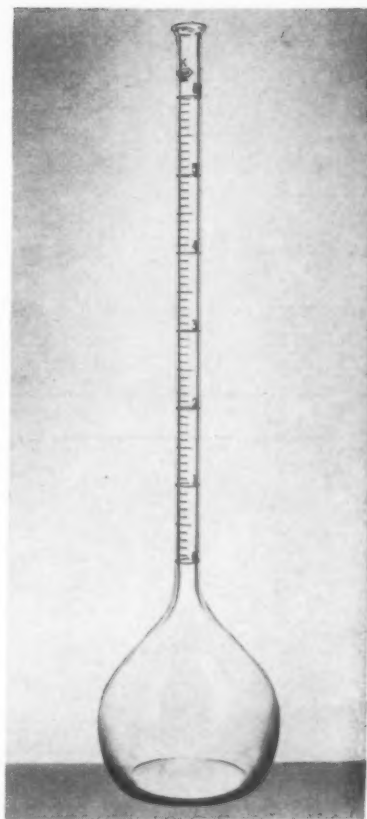
Mine Safety Appliances Co., Pittsburgh, Pa., recently published a 20-page, illustrated brochure describing its line of combustible gas analyzers and alarms. Included are part by part descriptions of the components of MSA analyzers. Actual alarm installations covered include equipment for a solvent recovery plant and a check system for a soybean extraction plant. Copies of this brochure (No. 0703-3) can be obtained from the manufacturer.

New Essential Oil Flask

A new flask designed to meet the requirements of the Essential Oil Association is now being produced by Kimble Glass Co., subsidiary of Owens-Illinois Glass Co., Toledo, O., it was announced last month. This new and improved Cassia volumetric flask has a larger body and more accurate neck than previously manufactured.

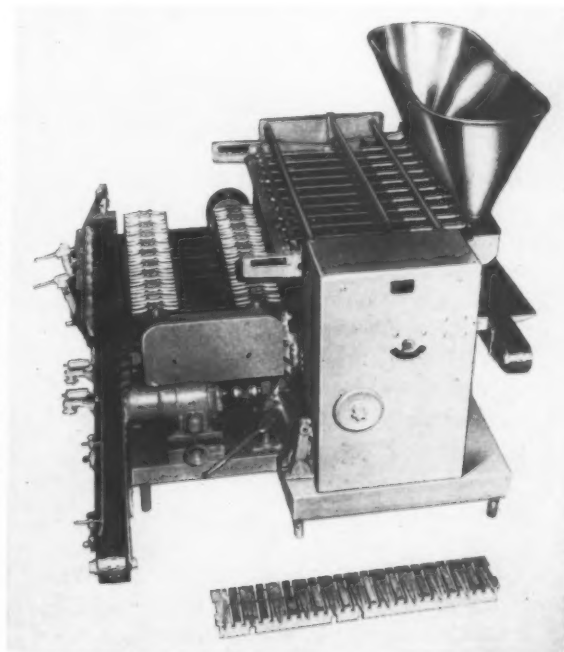
In many tests the volume of samples and reagents is too great to be accommodated in conventional-size flasks. The new flask is ideal for assay of oil of lemon grass as well as oils of cinnamon, chenopodium, cloves and spearmint.

The neck of this new Cassia flask has rings and numbers each 1



ml, with subdivisions of 0.1 ml. The tolerance is close, being equivalent to a 50 ml precision flask. Average capacity is 150 ml. All rings and numbers are marked with a permanent filler.

New heaviest duty piston type filling machine ever built was announced recently by Hope Machine Co., 8400 State Road, Philadelphia. Built in 6, 8 and 10 line sizes. Type 41 operates at speeds of up to 250 per minute in viscous product filling. It features adjustable filling head height, micrometer type quantity adjustment, no container-no fill, adjustable rising table lift, variable speed, ball bearing units on all shafts in a fabricated steel frame.





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A non-crystallizing hair shampoo formulation suitable for packing in jars or tubes consists of a soluble salt of a sulfated high-molecular weight alcohol (alkali metal or triethanolamine salt of lauryl, cetyl, stearyl, or oleyl sulfate), a humectant (glycerol), wax (carnauba or bees), Na_2SO_4 , and a stoichiometric amount of a neutral salt (CaCl_2) to react with the last-named to form an insoluble sulfate. Thus, a cream shampoo suitable for filling into jars is compounded from sulfated lauryl alcohol paste (sodium salt) 40, sulfated cetyl stearyl alcohol paste (sodium salt) 30, NaCl 2.5, CaCl_2 3.5, carnauba wax 2.5 water 3, beeswax 2.5, triethanolamine lauryl sulfate 11, glycerol 5 percent, citric acid (to give pH6), color and perfume. British patent 692 420, Ashe Laboratories Ltd.

Powdered Wax Polish

A powdered degreasing and polishing wax consists of a mixture of beeswax (45), ceresin (25), talc (15), NaHCO_3 (10), turpentine oil (three), yellow edible oil (two percent). This mixture is dried and ground and may be used to polish marble, glass, metal, enamel ware and floors. Italian patent 476 579, Alessandrina Elli. Through *Chem. Abstracts* vol. 48, page 13244.

Use of Soap Scrap

Waste portions of soap are consolidated and made into a usable soap bar by the use of a new and modified form of screw press. British patent 708674, Nield's Patent Ltd., Cardiff.

Acidic Cleanser

A mildly acidic cleansing agent is made by combining diglycolic acid or acid alkali metal diglycollate with some organic detergents or mixtures of syndets in powder form. This acidic combination is effective where alkaline cleansers do

not give satisfactory results: for instance in removal of rust stains, removal of color stains from hands, and cleansing greasy smeared surfaces of rust, metal spots, and discoloration. British patent 712327, Chemische Fabrik Budenheim, Mainz, Germany.

Permanent Print on Soap

Indelible print on soap bars is said to result from the use of the following solution: Amorphous resin, 90.5; coloring pigment, 0.5; wax 4; and vegetable gum 3 parts, mixed and dissolved in acetone or diethyl- or diisopropyl ketone. Spanish patent 208,805, 1953, D. Juan Graucande. Through *Chem. Abstracts*, vol. 48, page 14260.

Soap Drier

A continuous drier for soap bars for the artificial aging of soap is described in Italian patent 474-496, Giangiuseppe Mastrangelo. Through *Chem. Abstracts*, Vol. 48, page 13244.

Soap Paper Unit

An item combining soap and towel consists of a strip of paper divided by a line of perforations into two portions one of which is impregnated with soap and when detached may be used for washing, while the remaining portion constitutes a towel. It is suggested to manufacture the item as a continuous strip having a line of perforations defining a marginal soap-impregnated strip and spaced lines of perforations dividing the strip into detachable sections each comprising a hand towel and a soap-impregnated strip. British patent 677 829, R. G. Mathews and H. Shufflebottom.

French Soap Book

Savons et Detergents (Soaps and Detergents) by Jacques Bergeron, Librairie Armand Colin, Paris, France. Paper bound, 200 pages,

24 illustrations, $4\frac{1}{2}$ by $6\frac{1}{2}$ inches, price 250 francs. The main sections of this book deal with soaps, detergents, and characteristics of dilute solutions of soaps and of detergents, respectively. The first section lists and describes the most commonly used soap raw materials. Basic theories and considerations of soap manufacture are discussed next. Then the different methods of soap manufacture are classified and evaluated from a practical point of view. Manufacture, characteristics and applications of individual types of soap, household, toilet, and industrial, etc., are described. Classification, manufacture, and applications of detergents are dealt with in an equally detailed and clear manner. The last section compares the properties of both groups when in dilution.

This book excels in the concise clarity to which the French language lends itself so well and could serve as an introductory text to anyone entering the field of soap and syndet technology.

Brooklyn Poly Fats Course

An evening course, "Chemistry of the Fats and Oils," to be offered in the spring of 1955 by the graduate school of the Polytechnical Institute of Brooklyn, was announced recently. The course will be a one semester series of fifteen two-hour lectures to be taken on a degree or non-degree basis. Dr. Norman O. V. Sonntag of the research and development department of Colgate-Palmolive Co., Jersey City, N. J., will be in charge of the course.

The subject matter will include latest theory, reaction mechanisms, and new developments in the field. The occurrence, distribution, structure, isolation, purification and analysis of animal and vegetable fats and oils will be covered. Hydrolysis, saponification, hydrogenation, oxidation, autoxidation, ozonization and polymerization of fats and oils and the preparation and properties of fatty acids and their derivatives will receive special emphasis. Utilization of waste fats will be treated in some detail.

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SOAP and CHEMICAL SPECIALTIES

NEW Patents

The information below is furnished by patent law offices of

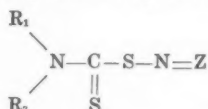
LANCASTER, ALLWINE & ROMMEL
402 Bowen Building
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. \$1.00 for Foreign. They will be pleased to give you free preliminary patent advice.

No. 2,687,964. Combined Insecticide and Polish, patented by Raymond A. Kennedy, Sioux City, Ia. The patent discloses a combination insecticide compound and liquid polish formed of the following ingredients and proportions:

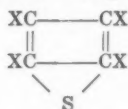
	Parts
Chlordane concentrate	5
Petroleum oil	1
Whiting	5
Liquid wax	89

No. 2,692,862. Cleansing Composition Having Anti-Bacterial Properties, patented by Paul Lipsitz, Forest Brook Glen, Del., assignor to E. I. du Pont de Nemours and Co., Wilmington, Del. The patent describes a cleansing composition comprising soap and an anti-bacterial agent represented by the formula:



wherein R_1 and R_2 are alkyl radicals of not over 2 C-atoms each, while $N=Z$ represents a radical of the group obtained by removing one N-attached H-atom from ammonia, primary and secondary alkyl amides having not more than 4 C-atoms in each alkyl radical morpholine and piperidine.

No. 2,691,616. Nitrothiophene Insecticidal Composition and Process of Using Same, patented by Joseph B. Dickey and Harry W. Coover, Jr., Rochester, N. Y., assignors to Eastman Kodak Co., Rochester, N. Y. The patent deals with an insecticidal composition essentially consisting of a uniform dispersion of 0.5-10% of an active ingredient having the formula:

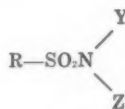


wherein X are substituents selected from the group consisting of NO₂ and H, at least one and not more than 2 of those substituents being nitro groups, and an inert insecticidal adjuvant as a carrier for the active ingredient.

No. 2,692,286. Preparation of Quaternary Ammonium Halides, patented by Richard D. Stayner, Berkeley, Calif., assignor to California Research Corp., San Francisco. In a process for producing germicidal quaternary ammonium halides by condensing in alkylbenzylhalide having an alkyl group of eight to eighteen carbon atoms and a tertiary-amine containing not more than 11 carbon atoms, the improvement covered consists in carrying out the condensation in the presence of water and 0.1 to 10% by weight of alkali metal bicarbonate based on the total alkylbenzylhalide and tertiaryamine.

No. 2,692,238. Wash and Rinse Composition for Whitening and Brightening Nylon, patented by Palmer G. Hendrix, Hickory, N. C., assignor, by mesne assignments, to Pro-Nyl Chemicals, Inc., Salisbury, N. C. The patent discloses a concentrated whitening and brightening rinse composition for nylon goods consisting essentially of water having 0.1% to 6.0% of an amino cumarin suspended stably therein and containing 0.1% to 6% mineral acid, said acid being of 66% strength and being present in an amount of from 50% to 100% of the amount of the amino cumarin, and at least 20% of a simple monohydric alcohol from the group consisting of methyl, ethyl, propyl, isopropyl, butyl and isobutyl alcohols, said amino cumarin being selected from the group consisting of p. diethyl amino cumarin and p. dimethyl amino β -methyl cumarin.

No. 2,692,237. Detergent Compositions, patented by Irving Joseph Krems, Fort Lee, N. J., assignor to Colgate-Palmolive Co., Jersey City, N. J. A detergent composition is covered consisting essentially of water-soluble detergent selected from the class consisting of the water-soluble anionic organic sulfate and sulfonate detergents, and a sulfonamide compound in an amount minor in proportion to said detergent and sufficient to improve the said removal power thereof, said sulfonamide represented by the formula:



wherein R is a higher alkyl group and Y and Z are each selected from the

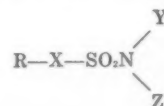
class consisting of hydrogen and lower alkyl groups.

A detergent composition in accordance with claim 1 which contains about 10 to about 80% by weight of water-soluble inorganic polyphosphate salts.

No. 2,692,236. Nonsoap Detergent Compositions Containing Antitarnishing Agents, patented by Warren William Sweet, Pompton Plains, and William Jasper Mead, West Orange, N. J., assignors to Colgate-Palmolive Co., Jersey City, N. J. A detergent composition normally tending in water solution to cause tarnishing of a copper base alloy consisting essentially of water-soluble inorganic polyphosphate salt, and having incorporated therein a small amount of di-butyl thiourea sufficient to inhibit said tarnishing is disclosed.

The patent also covers a detergent composition which contains about 10 to about 50% of water-soluble organic detergent selected from the group consisting of the water-soluble organic sulfate, sulfonate and non-ionic detergents.

No. 2,692,235. Detergent Composition, patented by Arthur Ira Gebhart, Union, N. J., and Irving Joseph Krems, Bronx, N. Y., assignors to Colgate-Palmolive Co., Jersey City, N. J. A detergent composition is patented consisting essentially of water-soluble detergent selected from the class consisting of the water-soluble anionic organic sulfate and sulfonate detergents, and a sulfonamide compound represented by the formula:



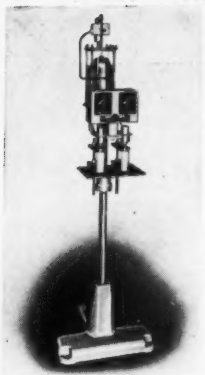
wherein R is a higher alkyl group, Z is a mononuclear aromatic nucleus, and Y and Z are each selected from the class consisting of hydrogen and lower alkyl groups, the amount of said sulfonamide compound being less than the weight of said water-soluble detergent and sufficient to improve the soil removal power thereof.

A detergent composition in accordance with claim 1 which contains about 10 to about 60% by weight of water-soluble inorganic phosphates.

No. 2,694,004. Polishing Material, patented by William W. Coffeen, Union, N. J., assignor to Metal & Thermit Corp., New York. A polishing material is described in this patent consisting of zirconium silicate in a state of subdivision such that at least 40% by weight of the particles lie within the range of 1 to 4 microns in average diameter, not more than 40% being below 1 micron in average diameter, not more than 70% being below 2 microns, not more than 30% being in the range of 4 to 10 microns, and none being above 10 microns.

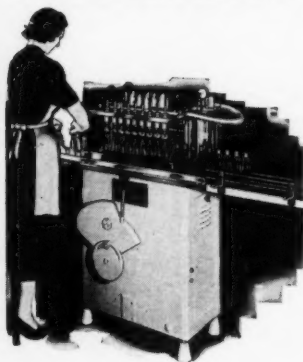
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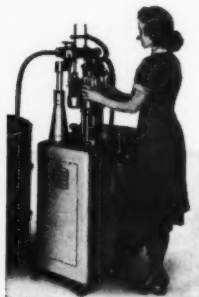


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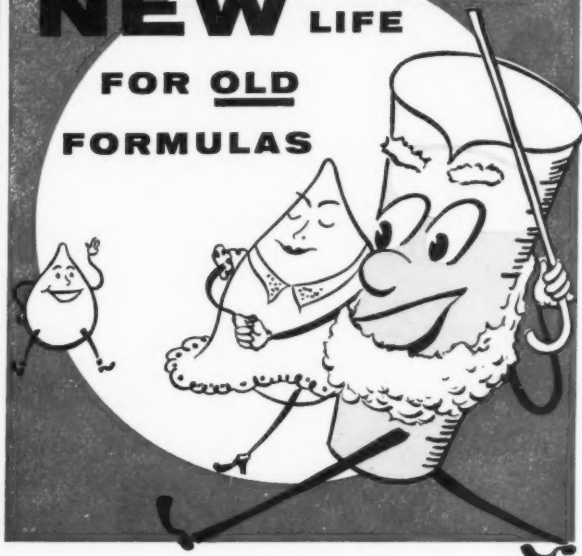
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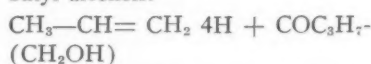
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SOAP PLANT *Observer*

By John W. McCutcheon

A recent letter from Carbide and Carbon Chemicals Co., New York, indicates that the present production of Oxo-Process chemicals is over 30,000 tons a year. Primary decyl alcohol, for example, is available at 21 cents per pound and primary tridecyl alcohols will be available in the spring at 24 cents per pound. Rohm & Haas Co., Philadelphia, has also been producing similar type alcohols for several years by the Oxo Process.

Since these materials may have some relation to detergent chemistry a quick review of the process and its history may be in order. The basic chemistry involves the reaction of an olefine at high pressures and elevated temperatures and in the presence of a cobalt catalyst with CO and H to form first an aldehyde and then a primary alcohol. One carbon is added to the chain so that propylene, for example, yields a mixture of primary butyl alcohols.



The trimere of propylene would yield the C_{10} decyl alcohol, the tetramere, a C_{13} tridecyl alcohol, etc.

This reaction was first noted back in 1930 by Smith, Hawk & Golden, (JACS 52, (1930) 3221) but no commercial notice was taken until 1939 when the Germans investigated the reaction thoroughly. During the war years they built a 10,000 ton per year plant to produce synthetic alcohols for detergent use. The uncompleted plant never went into production, but would have been satisfactory if the end of the war had not terminated the enterprise. The basic data accumulated by German research has been useful in developing the process here in America. An important difference exists, however, between the two methods of attack and has to do chiefly with the raw material used.



The German method was aimed almost entirely at producing synthetic detergent materials. It used as a source of raw material long chain olefines produced by cracking Fischer-Tropsch waxes.

The American procedure to date has been to confine operations to producing specific types of alcohols from low molecular weight petroleum gases,—principally propylene, butylene and their fractionated polymers. Nothing is said about their use as detergent materials in competition with lauryl alcohol, and this for a very good reason. The tridecyl alcohols manufactured from, say, the tetramer of propylene would have multiple CH_3 side chains which spoil detergency of the sulfated product. A few terminal CH_3 groups are not too objectionable and for this reason the German type olefines could have

been made to give satisfactory results.

Apparently, American industry would sooner enter the alcohol field with specific type products of known performance produced from a cheap easily available raw material than to attempt to produce a detergent alcohol from more difficultly obtained raw materials whose derivatives might or might not be acceptable on present standards.

It seems certain, however, that should the present source of lauryl alcohol be cut off, a satisfactory synthetic substitute could be made in quantity and at a price quite comparable to present standards. The estimated present annual consumption of lauryl alcohol for detergent purposes is placed at 35,000 tons. Soapers with whom the writer has discussed this phase of the business have generally left the impression that Oxo Process type materials are interesting and are to be kept under study.

* * *

THE idea of using butter as a soap making material is discussed from time to time. The writer is against it, period, and his reasons why are very simple: How could a material produced at the expense of so much care and labor ever become cheap enough to be considered a source of fatty acids for soap? It is conceivable that spoiled butter might find its way into the soap kettle. Some butter has been so used in the past as a soap raw material. Of the 141,000 tons presently held by the U. S. Department of Agriculture, only a negligible fraction, I am told, would fall into

TABLE I

	Butter (Fat Basis)	Tallow	CNO	Tallow/CNO ratio 4/1
Butyric	4	—	—	—
C ₆ C ₈ C ₁₀	3	—	14	3
Lauric	3	—	46	9
Myristic	12	6	18	8
Palmitic	24	27	10	24
Stearic	12	14	2	12
Oleic & other mono unsat.	40	50	9	42
Higher Unsaturated	2	3	1	2
	100	100	100	100



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this class. For those who would like to know what type of soap, butter would make, the comparison in Table I may be helpful.

On the present price basis of 8¢ tallow and 13¢ coconut oil, this would make butter (allowing

15 percent moisture content) worth just over 7½ cents per pound. If no allowance is made for processing costs to remove lower acids, etc. This should be worth two cents a pound. Now who has butter for sale at five cents a pound?

Detergents Chemistry Congress Topic

THE 27th International Congress of Industrial Chemistry, held in Brussels, Belgium, recently, included a section devoted to papers and discussions of fats and oils, soaps, detergents, and textile auxiliaries. Included in Section 24 was a series of papers by C. Capitani on polyvinyl alcohol as an emulsifying agent: I. General observations and research on surface and interfacial tension; II. Research on foaming power; III. Research on colloid protective power; IV. Research on emulsifying power. In the first two studies, G. Righi was co-author, in other two, G. Pirrone.

All data are derived from experiments run with polyvinyl alcohols (in aqueous solutions of various concentrations) of different molecular weights and different saponification numbers and with other usual and rare surface active agents. The authors find that the polyvinyl alcohols which are only partially saponified have the best surface active properties and that their activity at the water/vinyl acetate interface is equal to the activity exhibited by the more usual surfactants. Foaming power of polyvinyl alcohols is found to be inferior to that of most surfactants investigated, and their foam shows little stability. Colloid protective properties are best in partially saponified polyvinyl alcohols, and are found to equal those found in commonly used protective colloids.

Experiments show that in the use of polyvinyl alcohol as an emulsifier, best results are obtained with the alcohol of medium viscosity which is partially saponified. Surfactants alone do not give equally stable emulsions and greater im-

provement of the emulsions can be obtained by using partially saponified polyvinyl alcohols with small additions of surface active agents.

Paper on Toilet Soap

APAPER on the crystalline phases of toilet soaps was presented by P. Dobbelman. The most important publications on this subject were discussed. A method by which the author has prepared small quantities of these soap phases was mentioned. Radiodiagrams of patterns thus obtained are compared with those described in the literature. The best known brands of toilet soaps were examined and almost never found to contain the beta phase in measurable quantities, whereas the omega phase is always present and dominant. Preparation of beta soap in large quantities is possible only with special apparatus which permits regulation of temperature.

"Fatchemicals, a New Industry," was the title of a contribution by M. K. Schwitzer. The rapid development of chemicals derived from fats and oils has prompted the introduction of a new term: fatchemicals (oleochemie) as analogous to the term: petrochemicals. Most of the fatchemicals are derived from fatty acids rather than from whole glycerols. New methods for the deglycerination of fats and for the separation and purification of fatty acids are reviewed. Among the fat chemicals the following are described and principal methods for their manufacture are given: nitrogenous derivatives, alcohols, ketones and epoxy compounds; various other types are briefly mentioned.

L. Ivanovsky in a paper on

hydrocarbons pointed out that during the past twenty years, much important ground has been broken in the synthesis of high molecular-weight hydrocarbons, leading to the manufacture of the Fischer-Tropsch waxes and the polyethylenes.

Recent developments have proved that the latter, too, have great potentialities to offer, not only as high-melting waxes of the paraffin-wax-type but also as emulsifiable polish-waxes.

Much progress has also been made in the elucidation of the interrelationships between the molecular structure and the properties of ethylene polymers. These achievements may become of great importance for similar studies in the field of waxes.

Comparison is made between waxes and thermoplastics and the latest developments in these fields are briefly outlined.

H. P. Kaufmann's contribution dealt with acetic fats (Acetinfette) and M. Loury spoke on solvent fractionation and separation of lipids at low temperatures. Catalytic oxidation of oils by air at elevated temperatures was the subject of a presentation by J. M. Martinez Moreno and J. M. Huesa Lope. An approach to problems presented by oxydized acids ("acides oxydés") of fatty oils, their analysis and chemical structure, was discussed by C. Paquot and M. Querrolle. Other papers in section 24 included: Fatty acid esters having 18 carbon atoms with special attention to their physical properties by C. Paquot, J. Sorba, and N. Wieme; absorption of surface active substances at the solution/air interface measured by the tracer technique by R. Ruysse; and oxidation and color stability of fatty acids discussed from a practical point of view by G. L. Wiggerink.

Section 27, dealing with various branches of the food industry heard among others, A. A. Mossel on the stabilization of food stuffs by the addition of antiseptics or antibiotics; and A. Michiels on new applications for quaternaries in the conservation of food products.

Cosmetic Chemists

(From Page 36)

ratio of 55 percent palmitic and 45 percent stearic yields the only stable form of crystallization with large crystals of uniform structure, uniform melting point, maximum solubility. Study of these properties by X-ray diffraction and other methods supplies leads to performance properties of stearic acids and helps to establish the latitude in formulations to meet desired quality standards of finished products.

E. S. Lutton, also of P & G, gave a paper entitled "The Polymorphism of Glycerides—An Application of X-Ray Diffraction." The consistency of plastic creams is due mainly to the amount and crystal type of the solid content. X-ray diffraction is one of the most valuable techniques for the study of crystal type.

The paper "Acylated Amino Acids in Cosmetics" by H. W. Zussman and W. Lennon, Geigy Industrial Chemicals, New York, read by H. W. Zussman, dealt with lauroyl sarcosine and its suitability for shampoo, shaving cream, and skin cleansing preparations. Present best known application of acyl sarcosines is in the manufacture of dentifrice. Closely resembling fatty acids in appearance, the acyl sarcosines are stronger acids, somewhat more soluble and more crystalline. They absorb strongly on metal as well as protein surfaces. Anti-corrosive properties are most pronounced in the 10 percent solutions of the sodium or potassium salts of these compounds. The speaker suggested that these anti-corrosive characteristics should be of interest to the aerosol formulator. They have however yet to be tested in the presence of a propellant. Surface activity of acyl sarcosines is strongly dependent on the concentration of the un-ionized species or possibly a molecular complex $\text{RCOOH} \cdot \text{RCOO}^-$; as in the case of soaps. Triethanolamine lauroyl sarcosinate produces satisfactory lather which can be made

creamier by a small addition of sarcosinic acid. Formulation of cream shampoos may call for additions of fatty amides of polyethylene esters. Other general principles of product formulation with acyl sarcosines were outlined and detergent and biological characteristics of sarcosines were described. Application of TEA sarcosyl laurate in household detergent formulations was suggested.

The morning scientific program was concluded by Irwin I. Lubowe, Skin and Cancer Unit, New York Univ., Bellevue Medical Center, who spoke on "The Use and Newer Applications of the Silicone Compounds in Dermatology and Cosmetics."

This was followed by a business meeting and luncheon at which the new officers were installed.

In the afternoon session Peter Flesch, University of Pennsylvania School of Medicine, Philadelphia, spoke on "Newer Aspects of Epidermal Differentiation." He was followed by Donald J. Birmingham, U. S. Public Health Service, Cincinnati, who presented a paper entitled: "Alterations in the Skin Physiology Following Continuous Use of Soaps and Detergents." The multiplicity of factors responsible for the cutaneous changes laid to the use of detergents was stressed. Condition of the keratin, a normally functioning sweat apparatus and consequently normal pH, water retention and diffusion, CO_2 diffusion, normal function of the sebaceous glands, a balanced enzymatic household, and probably a variety of other factors hold partial answers to the problem raised by the use of detergents on the skin.

Such climatic factors as air currents, dewpoint, barometric pressure, temperature and humidity have been conclusively shown to exert tremendous influence upon the hydration of the skin and maintenance of healthy keratin. Skin affections, traceable to the use of detergents are more prevalent during the cold season. Alkali neutralization capacity of the skin is a prerequisite for

the maintenance of optimum hydrogen ion balance on the skin. This buffering action of the skin can be destroyed by the alkali influence of soap or by syndets containing alkali builders. The fat-emulsifying properties of soaps and detergents, an essential element in their soil removing action, leads to defatting of the skin. Excessive removal of lipoids can impair the oil replenishing capacity of the skin which becomes very dry and loses its pliability. This risk varies according to the individual's natural ability to supply his skin with the necessary amount of oil. Recent experiments with keratin suggested that sulfhydryls are released from dried defatted keratin which has been suspended and incubated for two hours in one to 10 percent solutions of soap and detergents.

The number and complexity of factors involved in the cutaneous response to an environmental contactant such as a detergent call for further investigation.

"The Mechanism of Percutaneous Penetration and Absorption" was the subject of a paper by Stephen Rothman, Section of Dermatology, Department of Medicine, University of Chicago. Absorption through the multilayered epidermis and through appendages can now be distinguished with the help of radioautographic techniques. Trans-epidermal absorption seems to have a partial barrier for electrolytes and for water. Liquid soluble substances with small molecular weight penetrate this barrier easily. While trans-epidermal absorption depends primarily on the chemical nature of the substance to be absorbed, trans-follicular absorption depends on the physical forces applied and present, such as rubbing, surface tension and wetting. Whether the absorption through intact skin can be promoted by choice of suitable vehicles is very problematic. The scientific program was ended with a paper by Herman B. Chase, Brown University, Providence, R. I., dealing with "The Physiology and Histochemistry of Hair Growth."

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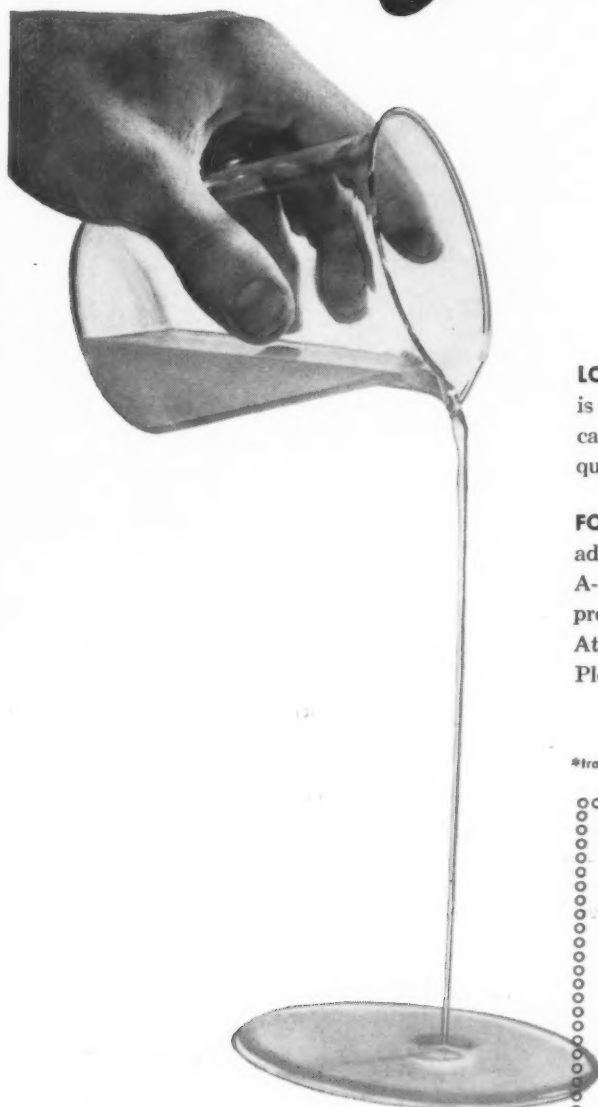
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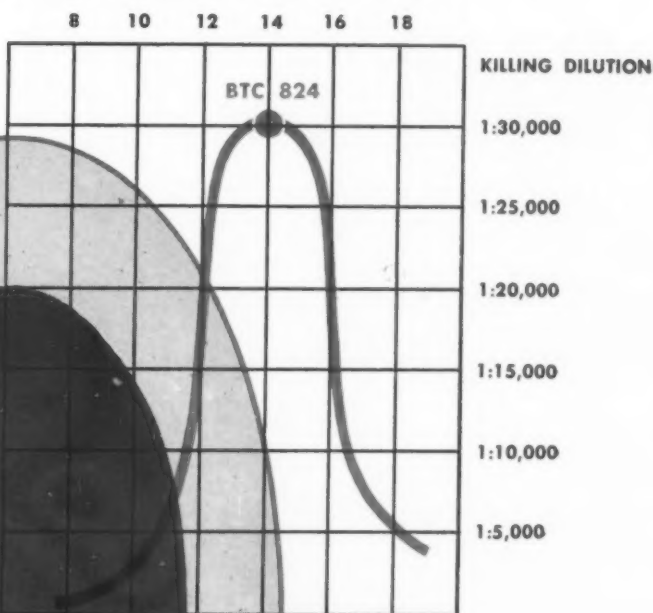
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Composite curve based on data
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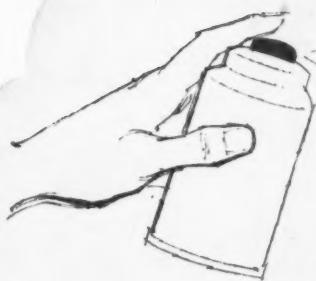
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R-50B

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CARDIS* ONE	195-200	1-2	4-5	12-16	55-65	EMULSIFIABLE PETROLEUM WAX
CARDIS* 314	184-189	4-6	4-5	13-16	45-55	EMULSIFIABLE PETROLEUM WAX
CARDIS* 319	180-185	5-7	4-6	18-20	65-70	EMULSIFIABLE PETROLEUM WAX
CARDIS* 320	180-185	5-7	4-5	28-30	75-80	EMULSIFIABLE PETROLEUM WAX
CARDIS* 262	195-200	3-5	BROWN	14-17	40-45	SPECIALLY PROCESSED PETROLEUM WAX
FORTEX	190-200	3-5	2½-3½	0.0	0.0	MICRO-CRYSTALLINE HARD AND PLASTIC
MEKON* B-20 A-20 Y-20	190-195 190-195 190-195	3-5 3-5 3-5	BROWN-BLACK AMBER-6 MAX. YELLOW-3-3½	0.0	0.0	MICRO-CRYSTALLINE HARD AND BRITTLE
POLYMEKON*	200-MIN.	0-3	YELLOW	0.0	0.0	SPECIALLY PROCESSED PETROLEUM WAX
WARCO WAX 180	180-185 180-185	4-7 4-7	WHITE BROWN	0.0	0.0	MICRO-CRYSTALLINE HARD AND BRITTLE
WARCO WAX 150-A	145-155 145-155	15-20 15-20	YELLOW 1-2 BROWN	0.0	0.0	MICRO-CRYSTALLINE PLASTIC
WARCOSINE	150-155	15-20	WHITE	0.0	0.0	MICRO-CRYSTALLINE PLASTIC
PARAFFIN	136-138 ASTM	FULLY REFINED				CRYSTALLINE
CANE WAX 700	169-174	1.0-1.5	BROWN	25-30	70-90	VEGETABLE WAX
CANE WAX 500	171-176	3 MAX.	LIGHT BROWN	25-35	55-70	VEGETABLE WAX
CANE WAX 517	165-170	1 MAX.	BROWN	20-30	65-75	VEGETABLE WAX

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BOUQUET LM	7331	LAV-MINT	2.50								
MINT	7351	MINT	2.75								
ALAMASK ND	1-773	SPICE	2.75								
BOUQUET PI	7321	PINE	3.15	///			///				
BOUQUET	7340	FLORAL	3.50								
LEMON	7212	LEMON	3.60	///					///		
PINE	7338	PINE	3.75								
MINT	7313	MINT	4.00								
BOUQUET OZ.....	7327	OZONE	4.25	///	///		///				///
COLOGNE	7329	COLOGNE	4.50								
BOUQUET BG	7200	COLOGNE	4.75								
ORANGE BLOSSOM	7344	ORANGE BLOS.	5.00								
SWEET PEA	7201	SWEET PEA	5.00								
COLOGNE	7337	COLOGNE	5.00				///				
PINE NEEDLE	7342	PINE	5.15				///				
MODERN 32	2-243	MODERN	5.25				///				
FOUGERE	7281	FOUGERE	5.15	///			///				
LAVENDER H	7333	LAVENDER	5.25				///				
BOUQUET SP	2-500	SPICE	5.25	///	///		///				
BOUQUET C	7290	CHYPRE	5.25								
BOUQUET	7282	LAV. FOUGERE	5.50	///			///				
FLORAL	7330	FLORAL	5.75								
BOUQUET ST 65	2-477	FLORAL	5.75								
ROSE	7346	ROSE	5.85				///				
FOUGERE	7320	FOUGERE	5.85				///				
LOCUST BLOSSOM	7339	LOCUST BLOS.	6.85				///				
GARDENIA	7306	GARDENIA	6.85								
BOUVARDIA	7341	BOUVARDIA	7.60								
COLOGNE	7348	COLOGNE	7.85				///				
LILAC	7240	LILAC	8.35				///				
LAVENDER	7283	LAVENDER	9.00								
COLONIAL	7347	SPICE	9.90								
SCOTCH KILT	7349	HEATHER	12.50								
LILY-VALLEY	7350	LILY-VALLEY	13.75								
LILY-VALLEY	R-133	LILY-VALLEY	18.90								
SHARL	6279	ORIENTAL	20.00								

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cockroaches
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wood-, book-boring
and related beetles

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clothes moths
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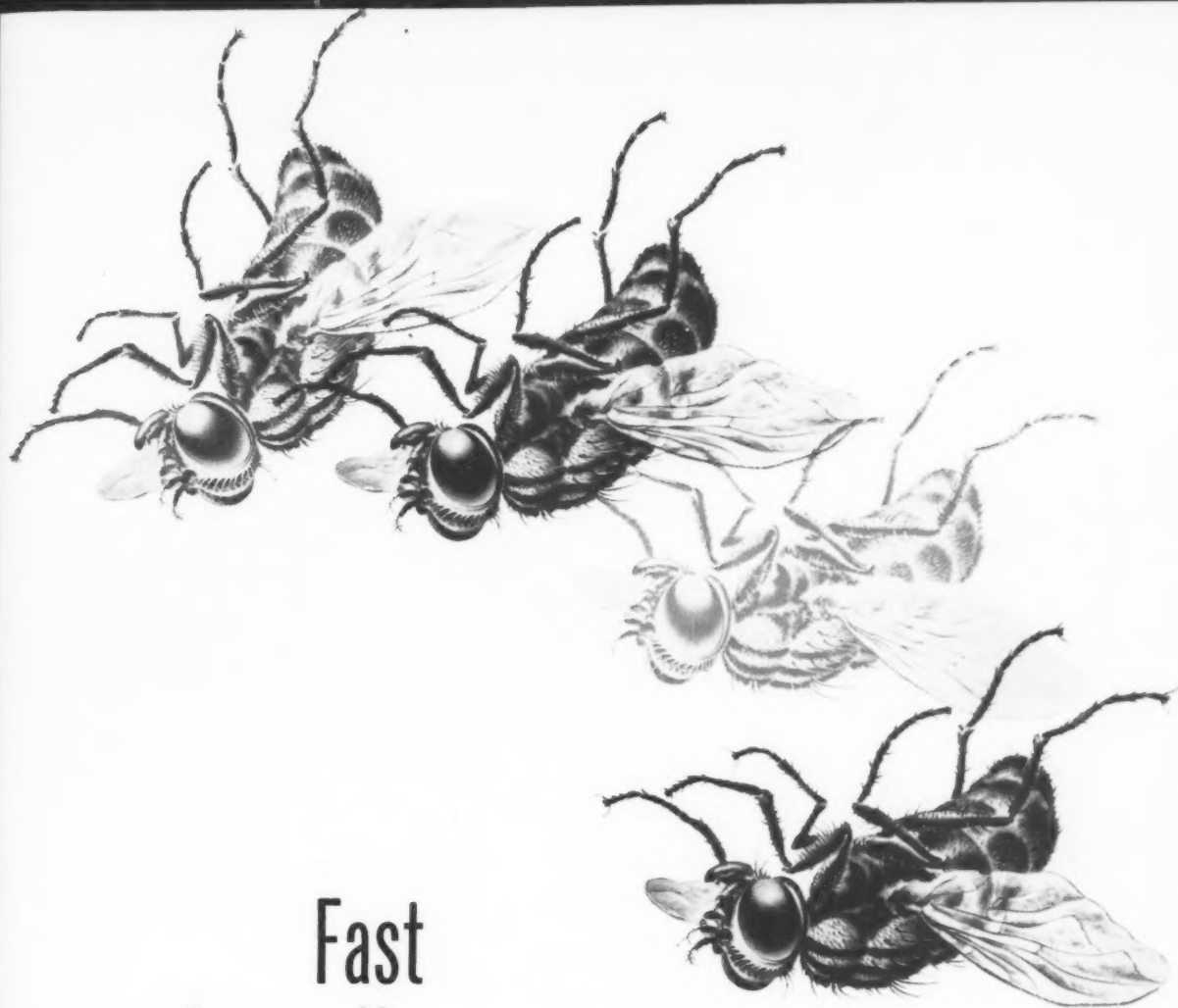
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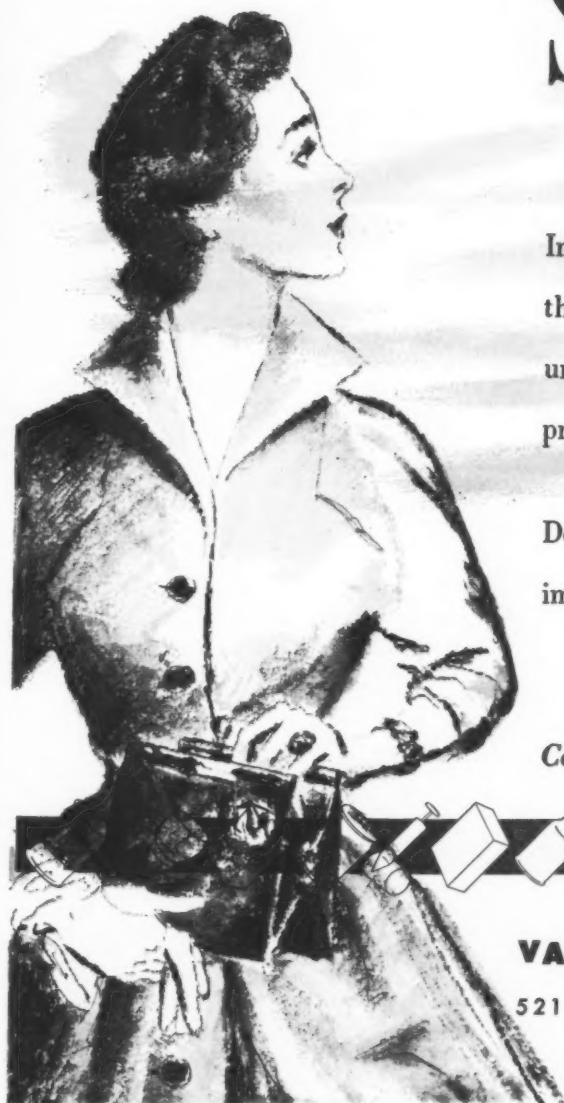
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If you are in the field of disinfectants, deodorants, insecticides, floor waxes, polishes, soap and detergent specialties, aerosol products, automotive chemicals, or other chemical specialties, it could pay you to look into the advantages of membership in the CSMA for your firm. Can we send you further information?

H. W. Hamilton, Secretary.



Chemical Specialties Manufacturers Association, Inc.

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New York 17, N. Y.

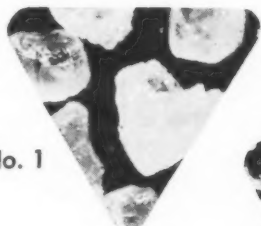
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H. W. Hamilton, Secretary

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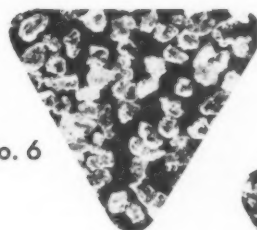
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JANUARY, 1955

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CSMA Meets, Reelects Fuld

CHEMICAL specialties from the standpoint of new developments, markets, and legislation affecting them were intensively considered during the 41st annual meeting of the Chemical Specialties Manufacturers Association, held at the Hotel New Yorker, New York, Dec. 6-8. Discussions and papers were presented during simultaneous or joint sessions of the six divisions of which CSMA is composed, as well as at two general sessions.

Other highlights included the election of officers and members of the board of governors, the presentation of the annual achievement award and the announcement of the winners of the aerosol packaging contest.

Melvin Fuld, president of Fuld Brothers, Inc., Baltimore, was reelected president of CSMA for a second year. Also reelected were: first vice-president, Dr. E. G.

Captions: Top to bottom, l. to r.

William N. Sullivan, Jr. of the Bureau of Entomology and Plant Quarantine, U.S. D.A., Washington, D. C., and Dr. Lyle D. Goodhue, formerly of the U. S. Department of Agriculture, and now with Phillips Petroleum Co., Bartlesville, Okla., holding the C.S.M.A.'s 1954 Achievement Awards, presented to them by H. R. Shepherd of Connecticut Chemical Research Corp. Mr. Shepherd is chairman of the Aerosol Division administrative committee.

Recipients of plaques awarded to winners of C.S.M.A. aerosol package contest: Louis L. Brennesholtz, Yardley of London, Inc., New York; A. J. Mitchell, Mitchell Chemical Co., Stratford, Conn.; W. H. Fischer of Walgreen Drug Stores, Chicago; Jack Schenberg, Bostwick Laboratories, Inc., Bridgeport, Conn.; Benson Storfer, Parfums Corday, Inc., New York; Herbert Fine, Plasti-Kote, Inc., Cleveland; Wade H. Morrow, Canada Rex Spray Co., Brighton, Ont., Canada; Charles H. Russell, Airkem, Inc., New York; Lilly Dache, General Beauty Products, Inc., New York. Photographs of all the winning products appear on pages 130-131 this issue.

Dr. H. L. Haller, left, accepts plaque citing the U. S. Department of Agriculture on "100 Years of Entomology". George W. Fiero of Esso Standard Oil Co., New York, made the presentation.





Klarmann of Lehn & Fink Products Corp., New York; second vice-president, Harry E. Peterson of Continental Filling Corp., Danville, Ill.; treasurer, Peter C. Reilly of Reilly Tar & Chemical Corp., Indianapolis, and secretary, H. W. Hamilton.

Newly elected to the board of governors were Dr. Edmond G. Young of the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del.; Dr. Alfred Weed of John Powell & Co., New York, and W. S. Jessop of U.S. Sanitary Special-

ties Corp., Chicago. They succeed the following retiring directors: James E. Ferris of Niagara Alkali Co., New York; Bayard S. Johnson of Franklin Research Co., Philadelphia, and Leonard J. Oppenheimer of West Disinfecting Co., Long Island City, N.Y.

Joining the board of governors as divisional chairmen are G. E. Barker of Atlas Powder Co., Wilmington, Del., newly elected chairman of the Soaps, Detergents and Sanitary Chemical Products Division, and N. J. Gothard of

(Turn to Page 126)

Captions: Top to bottom, l. to r.

H. W. Hamilton, CSMA secretary, and R. G. Puhle, Tykor Products Division, Borden Co., Brooklyn.

William N. Sullivan, Jr., and H. L. Haller, U.S.D.A. with Dr. Lyle D. Goodhue, Phillips Petroleum Co., Bartlesville, Okla.

Bernard Alpert, Dura Commodities Corp., New York, and R. J. Holzinger, Socony-Vacuum Oil Co., Brooklyn.

George Issenman, Beacon Co., Cambridge, Mass., and Leon Kresser, Bardahl Oil Co. Division Labs., St. Louis.

J. M. Hoerner, Armour & Co., Chicago; B. W. Schroeder, Archer-Daniels-Midland Co., Minneapolis, and Cameron Duff, Armour & Co., New York.

Vincent Cavanaugh and S. W. Harris of Continental Oil Co., New York; and Paul Sperry, Dodge & Olcott, Inc., New York.

George Hartz and Kenneth B. Nash, John Powell & Co., Division of Olin-Mathieson Corp., New York.

Dr. D. F. Hedenberg, Rex Research Corp., Toledo, and J. R. Kelly of Pennsylvania Industrial Chemical Corp., Clairton, Pa.

Captions, facing page, l. to r., top to bottom

Donald M. King, Masury-Young Co., Boston; Wilfred S. Jessop, U. S. Sanitary Specialties Corp., Chicago; A. G. Peck, Peck's Products Co., St. Louis; J. H. Clark, U. S. Sanitary Specialties Corp., Chicago; R. H. White, Jr., and Dr. R. H. White, Robert H. White Co., Philadelphia. Nicholas M. Molnar, Fine Organics, Inc.,

New York; Ray Barnett Old Empire, Inc., Newark, N. J.; and Peter Bauer of Fine Organics. Jack Hoerner, Armour & Co., Chicago; John H. Bahlburg, Wyandotte Chemicals Corp., Wyandotte, Mich.; and Paul J. Ammann, G. H. Wood & Co., Toronto.

Jack Varley, James Varley & Sons, Inc., St. Louis; Joseph Gregory, Chase Products Co., Maywood, Ill.; and Peter Hopkins, Airkem, Inc., New York; Joseph Quinty, Emery Industries, Inc., Cincinnati; Louis Argueso, M. Argueso & Co., Mamaroneck, N. Y.; J. L. Brenn, Huntington Laboratories, Inc., Huntington, Ind.; and C. S. Hughes, Huntington Labs.

Charles Poderzay, Standard Chlorine Chemical Co., Kearny, N. J.; Paul D. Torpin, McLaughlin Gormley King Co., Minneapolis; Leonard J. Oppenheimer, West Disinfecting Co., Long Island City, N. Y.; William R. Janney, National Can Co., New York; Al Candy, Candy & Co., Chicago; Abraham Wiener, Standard Naphthalene Products Co., South Kearny, N. J.; Jack Conover, L. Sonneborn Sons, Inc., New York; and George L. Foy, Shulton, Inc., Clifton, N. J.

Jack L. Wilson, Pennsylvania Industrial Chemical Corp., Chester, Pa.; Alfred Weed, John Powell & Co., Division of Olin-Mathieson Corp., New York; Ralph Hamilton, Baird & McGuire, Inc., Holbrook, Mass.; and L. R. O'Rourke, Pennsylvania Industrial Chemical Corp., New York.

Gordon Baird, Baird & McGuire, Inc., Holbrook, Mass.; Dr. George F. Reddish, Lambert Pharmacal Co., St. Louis; George R. Goetchius, Ayerst Laboratories, Division of American Home Products Corp., New York, and Dr. E. G. Klarmann, Lehn & Fink Products Corp., New York.



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Captions: l. to r., top to bottom

Joseph J. Gregory, Chase Products Co., Maywood, Ill.; Fred J. Lodes, Precision Valve Co., Yonkers, N. Y.; Gordon Gilroy, Precision Valve and Bob Svendsen, Chase. R. E. Vicklund, Sindar Corp., New York; H. R. Suter, Wyandotte Chemicals Corp., Wyandotte, Mich.; Thomas H. Reilly, General Electric Co., Schenectady, N. Y., and Dr. Wilhelm Gump, Sindar Corp., New York.

George Schumacher and Louis F. Willer, Velsicol Corp., Chicago; Frank C. Nelson, Esso Standard Oil Co., Linden, N.J.; Charles R. Lichtenberg, Chicago Sanitary Products Co., Chicago; Axel Sodergreen, West Disinfecting Co., Long Island City, N. Y.; John S. Lyall, Petrolite Corp., New York.

James S. Wolff, B. F. Goodrich Chemical Co., Cleveland; Dr. Frank O. Hazard, Wilmington College, Wilmington, O.; R. R. Bloor, B. F. Goodrich; W. H. Meyers, E. F. Drew & Co., Boonton, N. J.; Edward F. Collins, Chilean Nitrate Co., New York and Don F. Begley, Reilly Tar & Chemical Co., Indianapolis.

Werner G. Kuebler, Gillespie-Rogers-Pyatt Co., New York; Joseph E. Sternberg, Mantrose Corp., Brooklyn; Charles Freedman, Mantrose; Harold G. Lederer, R. M. Hollingshead Corp., Camden, N.J.; Willis J. Beach, Sugar Beet Products Co., Saginaw, Mich.; Jack Jones, Sugar Beet, and B. W. Schroeder, Archer-Daniels-Midland Co., Minneapolis.

Sinclair Refining Co., Harvey, Ill., chairman of the Automotive Division. They replace, respectively, Daniel H. Terry of Bon Ami Co., New York, and J. M. Kimmel of Aeropak, Inc., Chicago.

Members of the administrative committees of the six CSMA divisions were elected at the 41st mid-year meeting and took office shortly after the first of the year. In addition to the changes in divisional chairmen listed above, the following changes in the makeup of the divisional administrative committees become effective shortly: James A. Cloney of Antara Chemicals Division, General Dyestuff Corp., New York, Richard Egan of Hunt Manufacturing Co., Cleveland, and John L. Wilson of Economics Laboratory, Inc., St. Paul, join the Soaps, Detergents and Sanitary Chemical Products Division; A. G. Bowers of Hunt moves up to vice-chairman of the Disinfectant and Sanitizers Division, succeeding Roland S. Shumard of Monsanto Chemical Co., Cleveland, who resigned. Also elected to the Disinfectant Division are Irving Gaines of Onyx Oil & Chemical Co., Jersey City, N.J., and William A. Hadfield, Pennsylvania Salt Manufacturing Co., Philadelphia. New committee members of the Automotive Division are: R. J. Holzinger of So-

cony Vacuum Oil Co., Brooklyn, and L. M. Sesso of S. C. Johnson & Son, Inc., Racine, Wis.

The amendment to the constitution and by-laws covering associate members serving on the board of governors and on divisional administrative committees was voted on and passed. The change provides that an associate member may serve on the board of governors for a three year term. An associate member may serve as the chairman of an administrative committee, which entitles him to become a member of the board of governors. The new ruling, however, specifies that not more than one associate member may serve on the board at one time.

Record Attendance

ATTENDANCE for the three-day meeting was probably at an all-time high, with registration over 800, and total attendance close to 1,000. The luncheon on Dec. 7, for which close to 500 persons were present, was the largest in the history of the association. Resuming its status as a three-day meeting, the convention opened on Monday, Dec. 6, instead of on a Sunday as in past years. The first day was given over to meetings of the board of governors and committees. The second day of the 41st annual CSMA meeting began with simultaneous morning sessions of four

divisions on Dec. 7. They were followed by a luncheon, at which the annual achievement awards and awards to the winners of the aerosol packaging contest were presented. A short general session was held following the presentation of the awards.

Two divisional meetings: Aerosol and Disinfectant and Sanitizers, and motion pictures concluded the first day's program activities. A social feature, company open houses, ended and climaxed the second day of the meeting.

A general session, at which time reports of the president, treasurer and secretary were given, opened the day's activities on the morning of Dec. 8. In addition, the general session also included an address on "Legislative Lawlessness," two discussions of shipping of chemical specialties, an appeal for greater cooperation between government and industry in the defense program and a review of "Recent Developments in Pyridine Chemistry."

Six divisional meetings and two joint sessions followed the Dec. 8 luncheon and presentation honoring the U.S. Department of Agriculture on 100 years of entomology.

Automotive Division

FOUR papers dealing with brake fluids highlighted the opening session of the Automotive Division, the morning of Dec. 7. These included a "Report on the Brake Fluid Survey" by J. M. Russ of Carbide and Carbon Chemical Co., New York; "Recent Trends in Brake

Fluids" by G. L. Doelling of Wagner Electric Co., St. Louis; "Brake Fluid Legislation" by Karl M. Richards, manager of the field services department of the Automobile Manufacturers Association, Detroit, and "Test Coupons for Testing S. A. E. Brake Fluids" by Cyril S. Kimball of Foster D. Snell, Inc., New York. In addition, H. W. Hamilton, secretary of CSMA, presented "A Review of the State Laws and Regulations Affecting Automotive Specialties."

A proposed statute covering brake fluid which could be adopted by the Uniform Code and recommended to states desiring such legislation was described by Mr. Richards. The statute, which is in the process of development by the Automobile Manufacturers Association, is of the type that would permit state administrative authorities to adopt regulations requiring brake fluids to comply with the SAE specifications. It would also require that the label on the brake fluid container state that the fluid complies with SAE. Subsequent to such regulations, if any brake fluid did not so comply, enforcement officials could require removal from the market.

Adoption of such a provision and regulations, according to Mr. Richards, would not be burdensome to manufacturers, but would prove beneficial to manufacturers, state administrative officials and the public by prohibiting undesirable and inferior fluids from appearing on the market.

Insecticide Division

A NEW insecticide having characteristics that make it suitable for household and livestock applications was described by E. M. Swisher of Rohm & Haas Co., Philadelphia. His paper, entitled "A Review of the Current Status of Perthane," disclosed that the insecticide has very low mammalian toxicity. "Perthane," which is chemically diethyl diphenyl dichloroethane, has a crystallization pattern favorable for application to fabrics, according to Mr. Swisher. The deposition of "Perthane" in fatty tissues and its excretion in milk is extremely low, the speaker reported.

Soluble in a wide range of paraffinic and aromatic solvents, "Perthane" can be formulated in aerosols with low odor solvents. It can be combined with "Lethane 384" or other knockdown agents and utilized effectively in space sprays and in comfort sprays for dairy use, Mr. Swisher said. If the insecticide is officially approved for dairy use, oil-based applications as well as the wettable powder or emulsions may prove of value to the dairy fly control program.

"Perthane" is claimed to be effective against many household pests and can now be used in oil-based household sprays. Properly applied in pressurized or oil-base sprays, it will provide

12 months moth-proofing of fabrics, according to Mr. Swisher.

The possibility of a new method for separating the true pyrethrins and cinerins of pyrethrum flowers and extracts from other interfering substances was raised in a paper by H. E. Coomber of Mitchell Cotts & Co., London, and read by Mark L. Hill of Gulf Oil Corp., Philadelphia, in his "Report of the Chemical Analysis Committee of the Insecticide Division." The Coomber paper, "Pyrethrum Analysis and Methods—The British Viewpoint," sums up the British view as follows:

"A considerable amount of additional evidence has now been collected confirming the presence of substances in flowers and extracts, which interfere with the true assessment of the pyrethrins and cinerins. It is suggested that these may be polymerized 'pyrethrins' and/or substances which, on alkaline hydrolysis, yield acids identical or similar to those derived from the true 'pyrethrins.' It has also been suggested that crude concentrates contain variable quantities of extraneous ketonic material. If this is so, a situation exists which seriously interferes with the accuracy of current methods, both chemical and spectroscopic, in respect to their determination of the true active constituents.

"Ward has shown that it is possible to separate true 'pyrethrins' and

Captions: l. to r., top to bottom

Herbert S. Myers, Dill Mfg. Co., Cleveland; Henry Eickmeyer, Gert Kelleher and B. G. Wirsing, Schimmel & Co., New York; Charles Josephs, Industrial Toxicology Laboratories, Philadelphia; R. P. Kenney, B. F. Goodrich Chemical Co., Cleveland; Dr. Joseph B. Moore, McLaughlin Gormley King Co., Minneapolis, and Dan L. Kent, B. F. Goodrich Chemical Co.

Albert F. Guiteras, Hudson Laboratories, Inc., New York; Mrs. Ethel Walsh, Propel Chemicals, Inc., New York; Dr. Milton S. Schechter, U. S. Department of Agriculture, Washington, D. C.; Emery I. Valko, Onyx Oil & Chemical Co., Jersey City, N. J.; Wade H. Morrow, Canada Rex Spray Co., Brighton, Ont., Canada; James J. McMahon, James J. McMahon, Inc., New York; William Moburg, Rex Research Corp., Toledo and John Powell, publisher of "Modern Sanitation" magazine.

Victor DiGiacomo, Sindar Corp., New York; Mark Hill, Gulf Oil Corp., Philadelphia; Clarence L. Weirich, C.B. Dolge Co., Westport, Conn.; A. E. Budner, S. C. Johnson & Son, Inc., Racine, Wis.; Edward J. Paradise, Aromatic Products, Inc., New York; E. W. Van derWolk, Koppers Co., Pittsburgh, and Shockley Gamage, Magnus, Mabey & Reynard, Inc., New York.

James B. Snider, General Services Administration, Washington, D. C.; Robert Crockett and Joseph Green, Oil Specialties & Refining Co., Brooklyn; Dr. C. C. McDonnell, Chevy Chase, Md.; Melvin Fuld, Fuld Bros., Inc., Baltimore and Dr. W. G. Reed, Washington, D. C.





Captions: l. to r., top to bottom

W. C. Wallstein, West Disinfecting Co., Long Island City, N. Y.; James Dale, Wyandotte Chemicals Corp., Wyandotte, Mich., and James Ritz, Emery Industries, Inc., Cincinnati.

Saul Kaye, Department of the Army, Camp Detrick, Md., and Dr. Ray Treichler, Department of the Army, Washington, D. C.

John J. Crawford and Matthew J. Puccio, Federal Supply Service, General Services Administration, New York.



Phillip M. Harris, Mac-Lac Co., New York; Dr. Thomas B. Smith, Simoniz Co., Chicago, and Henry Blanchford, Mac-Lac.

isolate the constituents by chromatographic columns. This and subsequent work in the United Kingdom has suggested a method of approach which is well worth further study. However, it is now apparent that such methods have their own particular problems.

"Both Moore and the Cooper technical bureau have independently shown that a chromatographic step removes appreciable quantities, if not all, the 'false' materials, and in the case of ordinary extracts they have both arrived at a figure for true pyrethrins and cinerins which is about 15% lower than the figure normally recorded. It is thus possible that there is now available a method for separating the true pyrethrins and cinerins from other interfering substances, and it appears important to substantiate the authors' claims that this is done without causing deterioration or elimination of insecticidally-active material.

"In proposing any new method, it is considered most important that it should not be too complicated for routine use and, in this connection, Mitchell's views are relevant, namely that, for practical purposes, the first consideration is not to strive for an unobtainably high degree of accuracy but to provide as simple a means as possible for eliminating the active constituents compatible with a reasonable degree of accuracy and concordance between laboratories.

"In respect to flowers, it is suggested that consideration should be given to methods of cold extraction which appear to remove the active constituents quite readily leaving behind at least some of the undesirable constituents.

"Finally, it must be borne in mind that the aim in chemical analysis is to correlate it with the biological effect. This is a two-sided problem which can only be solved by both independent and collaborative search by chemists and entomologists alike for better methods of assessment."

"Retail sales of household insecticides have increased by 74 percent in the last five years and totaled \$108 million last year," Walter Washburn, vice-president of Young & Rubicam, New York

advertising agency, revealed in his discussion of "The Marketing of Small Packages." Mr. Washburn attributed most of the growth in insecticide sales to the promotion and sales of aerosol insecticides. "The growing volume of this one item alone appears to have accounted for more than the total increase in the sales of all household insecticides during the past three years," Mr. Washburn said. "It now has come to represent more than one half of the total household insecticide volume," he continued.

The success in promoting insecticides appears to be attributed to the development of new products or methods of use, Mr. Washburn declared.

The protection of livestock from biting flies by repellent-toxicant type mixtures was discussed in a paper entitled, "Evaluation of Methods for Control of Flies on Livestock" by Harry L. Haynes, Boyce Thompson Institute for Plant Research, Inc., Yonkers, N. Y., and Carbide and Carbon Chemicals Corp., New York. In his paper Mr. Haynes presented data showing the control of flies by the use of repellents and toxicants in oil sprays, water-emulsifiable concentrates, treadle sprayers, pressurized sprays and rubbing posts. Factors affecting the performance of such sprays and the benefits and disadvantages of the different methods were outlined.

A reduction in the toxicity to warm blooded animals of technical chlordane through the virtual elimination of hexachlorocyclopentadiene was announced in a paper by L. Ingle of the Department of Zoology of the University of Illinois, Urbana. Mr. Ingle's paper bore the title "A Revised Concept of Chlordane Toxicity to Warm Blooded Animals." Mr. Ingle pointed out that by removing hexachlorocyclopentadiene, a toxic and irritating unreacted intermediate, the toxicity of chlordane to warm blooded animals has shown very significant changes. These include: a.) LD-50 of technical chlordane is now equivalent to that of highly purified samples; b.) chronic oral toxicity is reduced; c.) hazards from vapor inhalation are now negligible; d.) dermal toxicity and irritation to the skin and mucous membranes is lower, and e.) evidence indicates a lower degree of hazard from inhalation of mists. These changes, Mr. Ingle pointed out, have been accomplished without reducing the effectiveness of chlordane as an insecticide.

Soap, Detergent Division

A PANEL discussion of "What is Expected and Required of Suppliers of Cleaning Materials," presided over by R. K. Rigger of Wyandotte Chemicals Corp., Wyandotte, Mich., was the feature of the Soaps, Detergents and Sanitary Chemical Products Division session, the morning of Dec. 7.

Dewey H. Palmer, research director of the Hospital Bureau of Stan-



dards, New York, pointed out that buyers have an almost impossible task in attempting to judge cleaning compounds, disinfectants and floor waxes on the basis of claims made for these products. Mr. Palmer, who is also a lecturer at Columbia University in institutional management, added that the list of ingredients of a product are of little assistance to the average institutional buyer who must judge the effectiveness of the product.

Mr. Palmer stressed the necessity of establishing acceptable standards of performance and recommended that a competent independent laboratory certify as to the conformity of particular products to the standards. Some such certification program is necessary if hospitals are to develop a logical and businesslike approach in placing orders for various types of chemical specialties, Mr. Palmer declared.

He indicated that asking the buyer to try out a sample of a floor product in his hospital leads to confusion, as trial on service tests must be carefully controlled and supervised to give results that are comparable and useful. Even experts in the manufacturing industry have experienced difficulty in comparing several products on the basis of service tests, Mr. Palmer said.

Too often the choice of the wax or cleaning compound to be used is made by the housekeeper, who cannot give the time necessary to judge the quality of the many products available. Due to the complex nature of modern waxes and cleaning compounds, only an expert can test and judge their relative effectiveness. Individual hospitals cannot afford to hire the experts to make the tests, Mr. Palmer stated.

The role of the professional consultant in the selection of cleaning materials was covered by Dr. Louis C. Barail, New York consultant. The consultant, he pointed out, not only is in a position to evaluate products being used or offered for use, but he can also suggest completely new products for the job. The experienced consultant is of tremendous value to the manufacturer because he knows many of the requirements and specifications set forth by maintenance departments or buyers in industry. When retained to formulate and promote a new product, the consultant should know the place of competitive brands in the market, their relative cost in the various industries and whether the advertising claims of these competitive brands are verified, exaggerated or unsubstantiated. The consultant should also be in a position to prepare a label based on facts which will establish the value of the product and have eye appeal as well. He should be able to assist in package design, from the point of view of sales appeal, and use and storage.

Besides increasing the performance and eye appeal of the product and its packaging, the consultant can help eliminate or, at least, reduce the risks of

Captions: l. to r., top to bottom

John A. Rodda, Fairfield Chemical Division, Food Machinery & Chemical Corp., New York and Chet Filter, Midland Laboratories, Dubuque, Ia.

Ira P. MacNair, publisher of **Soap & Chemical Specialties**, Michael Lemmermeyer, Aromatic Products, Inc., New York, and Edward A. Bush, Rhodia, Inc., New York.

Frank G. Calkin, Tennessee Corp., Atlanta, Ga., and W. H. Ross, Detrex Corp., Detroit.

Henry Brownstein, Hysan Products Co., Chicago; Albert Selig, Selig Co., Atlanta and Charles Mellick, Hysan.

toxicity, whether internal or external. In most cases this can be achieved by modifying the formula slightly, thus retaining the main features of performance, general properties, lasting qualities and other original desirable features of the product.

Speaking on "What Industry Expects and Requires of Suppliers of Cleaning Materials," J. Lloyd Barron, manager of the sanitation department of National Biscuit Co., New York, urged chemical specialties manufacturers to adjust themselves and their products to the industrial situation of the buyer they wish to sell. The seller must understand the nature of the products and their processing in the plant of the firm or individual to whom they are trying to sell their specialties, Mr. Barron stated. He pointed out that this calls for close cooperation, but that it is very necessary if a successful relationship for both parties is to be maintained. The specialties manufacturer should be aware of and understand the limitations imposed on a plant processing food, for example, when he offers products to the buyer in such an organization.

The work of the American Hotel Association in attempting to aid its members in purchasing chemical specialties was reviewed by J. S. Fassett, director of service department of the American Hotel Association, New York. Mr. Fassett revealed that the American Hotel Association is planning to eliminate approved product lists and laboratory testing for members just as fast as suitable standards for cleaning and other materials it buys are developed.

"In the near future the American Hotel Association will petition the American Standards Association for approval to sponsor a project to develop performance standards for cleaning and maintenance supplies. When your trade association, CSMA, is invited to represent you at a meeting called by the American Standards Association to explore the need for this standards project, we hope that with your wholehearted approval your CSMA representative will come prepared to vote for it. By so doing your industry will perform

(Turn to Page 149)





Winning Aerosols

Grand award winner and best package in hair preparations classification was Lilly "Dache Invisible Net" hair spray of General Beauty Products, Inc., New York. Can is a Crown "Spraytainer."

EYE appeal of the packages and label designs which at a glance told the end use of the products were big factors in choosing the top aerosol in the third annual aerosol packaging contest sponsored by Chemical Specialties Manufacturers Assn. Winners, shown here, were announced during recent 41st annual CSMA meeting.

Judges of 282 entries from U. S. and six foreign countries, were: Dr. Ephriam Freedman, director of Macy's Bureau of Standards; A. C. Burgund, vice-president and New York manager of Carr-Lowrey Glass Co.; Alexander Robbie, president of his own art and advertising firm; Miss Audrey Noxon, package designer.



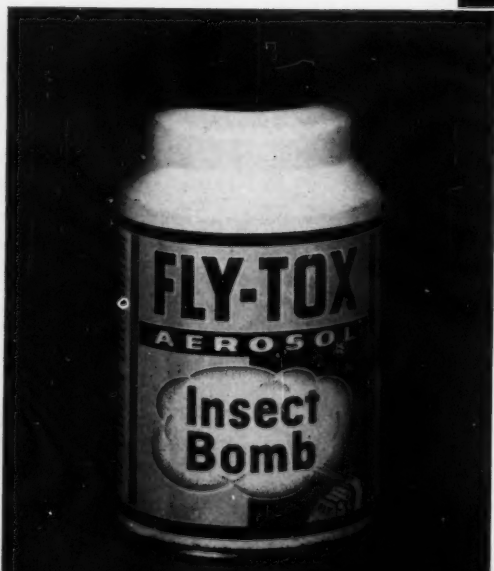
"Sardi Hand Cream" of Walgreen Drug Stores, Chicago, took top honors in the miscellaneous personal products class. Can was also a Crown Can "Spraytainer."

A foreign entry, "Fly Tox" Insect Bomb of Canada Rex Spray Co., Brighton, Ont., Canada, won in the insecticides classification. Another Crown can.



↑ Silicone "Glasspray" glass cleaner took top honors in the miscellaneous household products group. Wolco-Spray, Inc., Hartford, Conn., is the producer. Product features a carbon dioxide unit as propellant.

↓ Winner in the artificial snow category is "Xmas Snow" of Plastic-Kote, Inc., Cleveland. Can by Crown.



ls

in CSMA Packaging Contest



Best paint product package in the opinion of the judges was "Safe-T-Strip" paint and varnish remover of Bostwick Laboratories, Inc., Bridgeport, Conn. Can by Continental.

←



↑ Airkem, Inc., New York, produced the winning room deodorant package with its "Mist" air deodorant. Can by Continental.

Judges voted "Yardley Shaving Foam" of Yardley of London, Inc., New York, outstanding package in aerosol shave cream classification. Can is by Crown.

↓

Top honors were voted to "Gun Guard" gun and reel oil as the best package in the industrial products group. Product of Mitchell Chemical Co., Stratford, Conn. Can is Crown "Spraytainer."

↓



↑ "Parfum Corday" of Parfums Corday, Inc., New York captured top place as best in the glass and plastic containers classification. Product is purse size perfume dispenser of glass in metal sheathing.



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Germicidal Floor Wax

Biologically active floor coatings began with insecticidal floor waxes, now include germicide as trend grows to dual purpose chemical specialties.

By Kurt J. Wasserman*

Trio Chemical Works, Inc.

WE are all aware of the rapid rate of new developments in all types of chemical specialties for home and industry. In recent years, certain types of products have been converted from performing a single function to serving a dual purpose. In a few of these instances the additional function provided by these products was one of biological activity. For example, deodorant—bacteriostats in soaps, fungicides in paint and other protective coatings, insecticides in coatings and recently germicides in floor coatings.

In using the phrase "biologically active coatings" reference is being made to U.S. Dept. of Agriculture registered products claiming such activity in the end use, and not to products containing an active ingredient added merely to preserve a component of a formulation, such as the use of a phenolic type material for casein containing products.

Fungicidal Coatings

THOUGH paints are at times used as floor finishes, fungicidal paints are for the most part formulated for highly specific functions. For example, in food processing plants where moisture laden processing fumes in the air contain nutrients on which mildew can feed. In cases of this sort a fungicide should be used in the paint which will slowly leach to the surface and pre-

vent microbial growth in the greasy deposit. It is interesting to note that it has been shown (1) (2) that mildew, not dirt, is the principal cause of paint discoloration on approximately 70 per cent of the exteriors of white painted homes, which appear dirty.

Prominent among effective fungicides are organic copper and mercury salts as well as chlorinated phenols. Proper formulation and testing of the specialty paints and coatings are covered generously in available literature (3) (4) (5) (6).

Insecticidal Coatings

IN the last five or six years, insecticidal protective coatings have received increasing attention. In detailed reports, Block (7) has pointed out that coatings of insecticides become more toxic with age due to deposition of the insecticide on the surface of the coating rather than within the film.

Recently the successful utilization of an insecticidal paint in ships has provided a remedy against cockroach infestation (12). Toxic strength reportedly lasts for two years and is unaffected by washing. Urea formaldehyde was said to be resin carrying the insecticide.

There are presently on the market floor waxes which possess insecticidal activity. 0.5% lindane is the insecticide shown at present on the labels of two such products. These insecticidal waxes are claimed

to be effective against crawling insects such as roaches, silver fish and ants.

A G.S.A. bid for U.S.D.A. registered insecticidal floor wax, over a year ago, called for a self-polishing wax containing carnauba, which would be slip retardant and water-resistant. The lindane content was not to exceed 0.5%. The following test was required:

Apply two coats of wax to four linoleum panels (4" x 5"). Allow to dry under normal atmospheric conditions. Then place the panels on the floor of glass chambers with food and water so arranged that insects will not have to cross panels. The number of dead and moribund shall not be less than 80 per cent within 48 hours, using German male roaches.

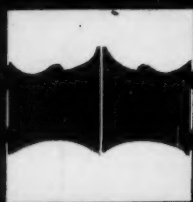
In formulating insecticidal self-polishing waxes the important factors to be considered for effectiveness appear to be:

1. Type and amount of insecticide to be incorporated.
2. Manner of dispersion or incorporation.
3. Compatibility and stability on storage.
4. Exuding or sweating out properties of the insecticide on the surface of the wax film.

The factors in a floor coating formula having been properly selected, the addition of a biologically active component should not interfere with the characteristics of the film such as drying, gloss, hardness, durability, color, etc. Also

* Presented at the 41st Annual CSMA Meeting, New York, Dec. 8, 1954.

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GEIGY METHOXYCHLOR "50"

(50% methoxychlor wettable powder)

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important are odor, cost and toxicity.

Insecticidal floor waxes appear to have a market in localities that are particularly insect conscious, such as the warmer areas of the United States.

If increased effectiveness against flying insects could be accomplished, the utility of insecticidal coatings could undoubtedly be expanded.

Germicidal Coatings

PUBLISHED reports on the problems involved in formulating a germicidal floor wax go back many years (8) (9). However, those problems pertained generally to solvent type floor waxes. It is only recently that germicidal self-polishing water emulsion waxes have reached the marketing stage.

In the choice of a germicide for this type of product the following general standards could well be followed:

1. The germicide must, of course, be highly effective in killing a wide variety of micro-organisms.
2. It should be non-staining.
3. It should be possible to formulate it into an aqueous medium.
4. It should be stable and effective in presence of organic matter.
5. It should be comparatively non-toxic and non-irritating to man and pets in use concentrations.

Less significant but important considerations are:

6. Type of odor.
7. Freedom from corrosive action on metals.
8. Its compatibility characteristics.

In choosing a commercially available germicide for a self-polishing floor wax, a choice would seem to fall between a quaternary ammonium type compound, and the synthetic phenolic derivatives.

As far as is known there appears to be about two germicidal floor waxes available today. One of them has as its active ingredient 2.5 per cent of a quaternary germi-

ORGANISM TESTED		EXPOSURE TIME IN MINUTES			
		5	10	15	20
SALMONELLA TYPHOSA	SUBCULTURE	0	0	0	0
	RESUBCULTURE	+	0	0	0
DIPLOCOCCUS PNEUMONIAE TYPE III	SUBCULTURE	0	0	0	0
	RESUBCULTURE	0	0	0	0
STREPTOCOCCUS PYOGENES HEMOLYTICUS	SUBCULTURE	0	0	0	0
	RESUBCULTURE	0	0	0	0

+ = GROWTH
0 = NO GROWTH

PHENOL RESISTANCE

PHENOL DILUTION	D. PNEUMONIAE			S. PYOGENES		
	5'	10'	15'	5'	10'	15'
1:100	+	0	0	+	0	0
1:110	+	+	0	+	+	+

cide, a cationic type material.

The question which immediately presents itself is, of course, one of compatibility. What happens when this wax comes in contact with anionic soap and wax residues usually found on a floor? Undoubtedly the result will be a partial or total inactivation of the germicidal capacity of the wax.

A similar situation of the adverse effects of soap residues on a quaternary germicide was recently reported on by Stuart and his co-workers (10). The manufacturer of this particular cationic containing floor wax is forced to meet any incompatibility problem by recommending, for best results, his own brand of floor wax cleaner.

The other germicidal floor wax* has been formulated with 3.5 per cent ortho-benzyl-para-chlorophenol, a chlorinated phenol**. Among the reasons for the choice of this germicide are:

1. Its compatibility with soaps and anionic surfactants.
2. Its broad germicidal spectrum.
3. A very low order of toxicity.
4. A rather mild phenolic odor.

Once the formulation was

properly compounded it was necessary, of course, to ascertain if the stable germicide containing emulsion still retained any activity.

Independent laboratory data pertaining to this germicidal self-polishing floor wax showed the following:

To determine preliminary activity the following bactericidal test was conducted on three pathogenic organisms: *Salmonella Typhosa*, *Diplococcus Pneumoniae* Type III and *Streptococcus Pyogenes Hemolyticus*. Five ml portions of the undiluted sample were placed in test tubes and kept at 20° C. 0.5 ml of a 24 hour culture of each organism was added to a tube. At intervals of five, 10, 15 and 20 minutes after having added the culture, one loopful was removed and placed in 10 ml of a nutrient broth. Four loopfuls from each broth tube were resubcultured into a second tube containing the same amount of the same medium. All subculture and resubculture tubes were incubated at 37° C. for 48 hours, and the tubes observed for growth. Growth was obtained in the control tests run with water instead of the samples. (See Table I.)

The results indicate that when tested according to the above-

* Trade mark—"Amazon" Germicidal Floor Wax — Trio Chemical Works, Inc.
** Patent pending.

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mentioned procedure, the undiluted sample of the germicidal floor wax kills *D. Pneumoniae* and *S. Pyogenes Hemolyticus* within five minutes and *S. Typhosa* within 10 minutes at 20° C.

In order to determine if a dried film of the germicidal floor wax was at least bacteriostatic the following procedure was followed: Strips of filter paper, one inch wide, were immersed in a sample of germicidal wax and a conventional wax, as a control. They were then hung up to dry overnight at room temperature. One-inch squares were cut from the center of each strip. The squares were tested in duplicate by the agar plate method against *Micrococcus Pyogenes* var. *Aureus*. Incubation was for 48 hours at 37° C, at the end of which time the plates were examined for evidence of bacteriostasis as determined by the presence of a zone of inhibition of growth of the test organism in the agar surrounding the test specimens.

Results: The sample of conventional no-rubbing wax gave no zone of inhibition of growth of the test organism. However, the sample of germicidal floor wax gave a zone of complete inhibition of growth of the test organism in the agar surrounding both test specimens. The width of this zone of inhibition was five mm in one test and six mm in the other, or an average of 5.5 mm.

As can readily be seen, when tested according to the above procedure the dried film of the germicidal floor wax is bacteriostatic. The above two tests were utilized to indicate the preliminary activity of this particular floor wax.

At this point, a test was designed to simulate the conditions existing under normal application of the wax on a surface such as rubber tile.

Procedure: A 24 hour culture of *Salmonella Choleraesuis* was diluted 1:100 with distilled water. One four mm loopful of the diluted culture was rubbed over the finished surface of each of 16 rubber tiles, each piece being one inch square.

Each square was placed in a separate Petri dish and allowed to dry for 30 minutes at 37° C., after which time the following tests were carried out:

Test A: Four contaminated squares of rubber tile were rubbed with one four mm loopful of the sample, one loopful being used for each square. After drying for 30 minutes at room temperature (approximately 25° C.), a second loopful of the sample was applied to each square and the squares were again allowed to dry at room temperature for 30 minutes. 10 ml of F.D.A. nutrient broth were then poured onto each square and the organisms were rubbed off with a glass rod. Pour plates were then made into tryptone glucose extract agar, using 1.0 and 0.1 ml of nutrient broth for each agar plate. The plates were incubated at 37° C. for 48 hours and the colonies which had developed were counted

with the aid of a Quebec colony counter.

Test B: The same procedure was used as above, except that the sample of wax was applied only once to each square instead of twice.

Test C: The same procedure was used as in Test B, except that five per cent phenol was applied to each square once instead of the sample of wax.

Test D: The same procedure was used as in Test C, except that distilled water was used instead of the sample of wax or the five per cent phenol. This is the control.

The results obtained may be seen in Table II, below:

As can be seen, when tested by the above procedure, the germicidal self-polishing floor wax reduces the bacterial population of rubber tiles heavily contaminated with *Salmonella Choleraesuis* by approximately 99.8 per cent, using (Turn to Page 167)

TABLE II

TEST	COLONY COUNT AMOUNT PLATED		BACTERIA/SQ. IN. RUBBER TILE <i>SCHOLERAESUIS</i>	AVERAGE % REDUCTION
	1.0 ml	0.1 ml		
A-2 COATS				
1	0	0	Less than 10	99.8
2	3	0	30	
3	4	0	40	
4	2	0	20	
B-1 COAT				
1	6	1	60	99.5
2	11	1	110	
3	7	1	70	
4	4	0	40	
C-5% PHENOL				
1	3	0	30	99.7
2	11	0	110	
3	6	0	60	
4	0	0	Less than 10	
D-CONTROL				
1	Overgrown	145	14,500	
2	"	160	16,000	
3	"	170	17,000	
4	"	130	13,000	

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POWDER AEROSOLS

By **Walter C. Beard, Jr.***

Risdon Manufacturing Co.

Spray-it-on aerosol lubricants provide a quick, easy way to reduce friction wear and silence squeak-prone parts of machinery, such as the springs of an automobile. This particular product is a dry graphite film lubricant for use on frictional parts of machinery in addition to regular lubricants. It's recommended especially for use in spraying individual parts of engines before they're re-assembled after overhaul. (Du Pont photo.)



IN the development of pressurized packages, many products are found not to be soluble in the propellant or known propellant-solvent systems. Further, the products may not lend themselves to aeration as foams or be compatible with a foaming agent. Nevertheless, their utility as well as their marketability might well be enhanced if spraying from a disposable container could be shown to be feasible. Products of this type may lend themselves to being dispensed as powders or dusts, and should not be dismissed from consideration because of solubility difficulties. In fact, some materials now being dispensed in solvent bases might give better end-use performance if applied as dry powders. Other products are normally used only as dusts, such as certain topical medicaments and fungicides; these could, in the course of time, be marketed in pressurized containers.

From other standpoints, the

*Presented at 41st annual meeting, New York, Dec. 8, 1954. Chemical Specialties Manufacturers Association.

pressurized dry powder dispenser offers several advantages over hand operated powder guns, squeeze bottles or other types of insufflators. For example: more uniform deposits are usually obtained from pressurized containers; water sensitive materials can be kept in an essentially anhydrous state for the life of the package; medical and cosmetic products can be maintained under sterile conditions; and, contamination or refilling is virtually impossible.

Problems with Powders

AS with the development of other types of aerosol products, certain problems are encountered with powders, and few products can be taken from the shelf and pressurized without giving some thought to reformulation to meet the requirements of the new package. In keeping with expectations, the greatest of these problems is clogging. A secondary, but closely related problem is leakage. A clogged valve will often be a leaking valve.

Clogging appears to result

from one or more of the following:

- a) Large and/or needle shaped particles,
- b) The presence of only partially soluble resinous or crystalline materials in the product,
- c) Agglomerative sedimentation of the product.

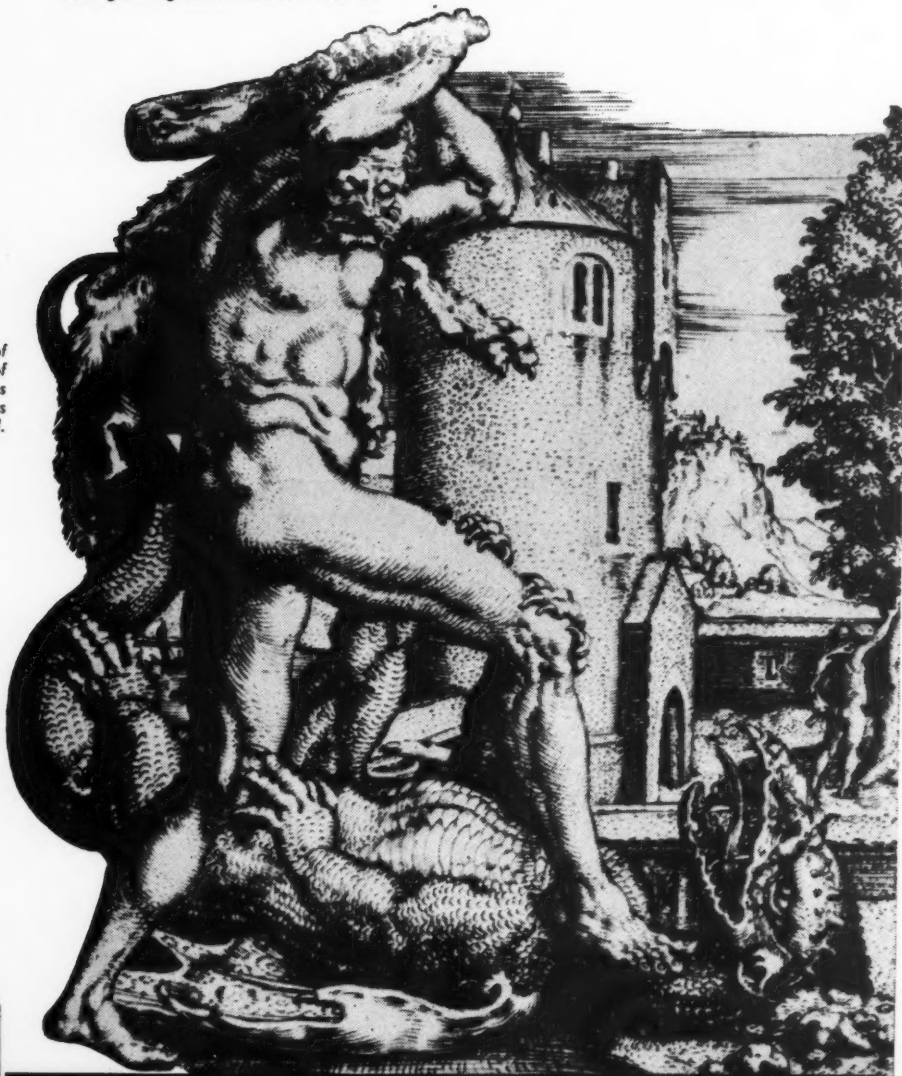
From the standpoint of particle size alone, no limiting dimensions have been established; however, protein particles up to and in the 150 micron range have been handled with no difficulty on a low solids basis. Talc composed of particles in the 50 to 75 micron range is readily handled at a 10 percent solids level; 20 to 30, and possibly higher percentages of insoluble solids can be handled under some conditions. Needle-shaped or fibrous particles, as well as extra large ones, tend to mat or form "filter cakes" in the valve passages and cause clogging, even at low solids levels. They may also deposit at the valve seat, prevent the valve from closing, and thus cause leakage. Even so, this type of trouble can be reduced through correct formulation of the

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product and sound valve design.

Materials having only a limited solubility in the propellant-solvent system tend to give trouble for at least two reasons: one, particle sizes tend to increase due to crystal growth on standing, and for the same reason, aggregates of crystals and insoluble components may form; second, materials of this type tend to become deposited at the expansion orifices and spray nozzle of the valve due to the rapid loss of solvent by evaporation at these points. These deposits cause clogging and leaking. DDT powder and cube resins, for example, have been found to be particularly troublesome in this respect.

Clogging due to agglomerative sedimentation — the formation of hard packed cakes of powder in the bottom of the container and, at the same time, hard plugs in the lower end of the valve dip tube — can be eliminated or minimized through the use of certain selected propellents or propellant mixtures. Sedimentation may also be reduced by the use of certain suspending agents in combination with the selected propellant, if the foreign material will not affect the quality of the product. The first of these processes offers distinct advantages for medical and cosmetic applications because no extraneous materials are deposited with the active ingredients.

Selecting Propellant

THE selected propellant process is based on the discovery that agglomerative sedimentation is materially reduced when the propellant is selected or prepared to have a specific gravity greater than, equal to, or within about eight tenths of a gravity unit less than the specific gravity of powder to be dispensed. In this process, the powder will be uniformly dispersed in the propellant, will float, or will settle slightly to form soft cakes which can be readily dispersed on shaking. Propellents may consist of typical halogenated hydrocarbons, low boiling hydrocarbons, mixtures of these, or

any suitable liquefied gases, or solutions of bases in liquids.

Two or three examples taken from the patent applications should illustrate the applicability of the process:

1. An antibiotic with an inert diluent dust having a specific gravity of 1.52 was successfully prepared and dispensed as a pressurized product using either 65 percent "Freon-113"⁽¹⁾ and 35 percent "Freon-12"⁽²⁾ having a specific gravity of ca. 1.45; or 65 percent "Freon-11"⁽³⁾ and 35 percent "Freon-12" having a specific gravity of ca. 1.39. The latter mixture was adopted for production because of lower costs.
2. The 65 percent "Freon-113"-35 percent "Freon-12" mixture was found to give excellent results with a certain complex protein material which floated in the propellant. This example is of further interest because the "Freon-113" first served as a grinding medium in which the particle size of the amorphous protein could be reduced to a usable size. Here, as in certain other instances, the product was handled as slurry at room temperatures, and the "Freon-12" was introduced later for pressurizing.
3. Sodium bicarbonate having a specific gravity of ca. 2.2 and a particle size of approx. 80 microns was dispensed by use of a propellant consisting of 50 percent "Freon-11" and 50 percent "Freon-12" having specific gravity of ca. 1.4.

Considering the problems of selected specific gravity, pressure, and cost, a mixture of 65 percent "Freon-11" and 35 percent "Freon-12", which develops 25 psig at 70°F, appears to be widely suited for powder work. This mixture also lends itself for use in protected glass containers. Samples prepared in glass can be studied, for example, for sedimentation rates, ease

(1) DuPont brand trichlorotrifluoroethane.

(2) DuPont brand dichlorodifluoromethane.

(3) DuPont brand trichloromonafluoromethane.

of redispersion, visual changes with age, and the development of agglomerates. Commercial packages as well, are readily made in glass.

Production filling of pressurized powders should present no great problems. The product may be added as a dry powder and the propellant as a liquid under refrigeration, or by pressure filling; or, the powder may be introduced in the form of a slurry in the high boiling component of the propellant, or as a slurry in the total propellant mix.

Valve

WHEN a high percentage of solids is to be dispensed—say 10 percent to 30 percent by weight—it may be necessary to modify the valve orifices and expansion chambers, as well as the propellant pressure, to provide for a comparatively high spray rate. This may be found objectionable because of the widespread dispersal of the product; nevertheless, a rapid through-put is often necessary to prevent the powder from piling up or caking in the valve mechanism. This particular consideration serves to point out that the problems of handling dry powders are best understood as being analogous to those encountered in the handling of ordinary slurries of finely divided solids in non-volatile liquids, viz., the product is easier to handle when it is kept in uniform suspension and kept moving.

Valves designed for powder spraying provide unrestricted access of the product-propellant slurry to the valve seat and an exceptionally short, free path from the seat to the spray orifice. This path is only a few thousandths of an inch long, and thus almost eliminates space in which product could accumulate to collect moisture or fall back to cause subsequent clogging. Further, the valves have a sharp shut-off and a high valve seating pressure, both features essential for minimizing leakage. Proper seating, or tight sealing appears to depend to some extent on the hardness as well as dimensions of the powder particles.

(Turn to Page 169)

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Purchasing, Refining and Testing of

Vegetable Waxes

ONLY a few years ago a purchasing agent could call on a number of carnauba wax suppliers and refiners and order his requirements for carnauba wax without worrying about quality control. The conversation would primarily be concerned with price and delivery and the purchasing agent's problems were over after the order was placed and confirmed. Similarly, the American refiner would simply take the carnauba as it arrived from Brazil, filter it, and ship it. This did not necessitate any great knowledge of chemistry or need for having extensive laboratories or elaborate processing equipment. As a matter of fact, the speculative angle was more of a concern to the seller and buyer of carnauba than quality. Correspondingly, the Brazilian exporters worried even less about the grading and selection of the crudes, but in turn would pack and ship what had been received from the farmer, and would consider the transaction closed at the time the sale was completed.

Today the quality problems connected with natural waxes have never been more acute. For a period of years carnauba wax and other vegetable and animal waxes have been suspected of manipulation. Specifications have, at best, been too general in most instances, or in a few other instances, too unrealistically narrow. We shall, in most cases, refer to carnauba wax because this wax has been and still

*Paper presented before 41st annual meeting, Chemical Specialties Manufacturers Assn., New York, Dec. 7, 1954.

is considered the standard of all waxes. However, while we might mention carnauba in this paper most other waxes can be included. We refer specifically but not exclusively, to ouricury, beeswax, candelilla, esparto, etc.

What the industry has been wanting more than anything else is a complete set of specifications accepted and set up by not only the American wax consuming industry, but also by the American wax refining industry, and more important yet, the Brazilian wax producers industry. History and trade relations tell us that this development will take a considerable length of time before all parties agree to and adhere to anything that we will develop presently. However, this increases the urgency and responsibility that we have and our company wishes to congratulate all official and semi-official bodies as well as individual companies who have given of their time, effort and money to work on this problem. Particularly to the ASTM and its scientific committees; the CSMA and its Wax Qualities Committee; the S. C. Johnson company for the development and preparation of new test methods and all other men and companies who have worked on this problem.

What consumers are interested in now can roughly be stated

in the form of two questions.

1. How do we know that we are paying the right price for carnauba wax?
2. How do we know that what we buy will do the job in our formulations?

In attempting to answer these questions we will tell you how waxes are purchased, how they are refined, and tested, and what essential functions are performed by the wax refining industry. With the assurance that practical execution will be as good as the theoretical outline we hope to find positive answers to both questions.

It is the job of the wax refiner to process a great assortment of crude waxes into products of ready availability, uniform performance in the great variety of industrial applications covered by the wax consuming industry. Vegetable and animal waxes, having been collected from many natural species and geographical sources, arrive in this country in a great variety of grades, types, and degrees of refinement. In addition to the natural variation produced by species, climate, and seasons, there have been added artificial variations due to the method of collection and separation of the crude wax, as well as possible contamination and adulteration be-

By George R. Freund*, Cornelius Products Co.

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tween the tree in Brazil and the factory.

To illustrate our point, an area extending from Chicago to Nashville to Charlotte to Boston, would be approximately equivalent in size to the carnauba growing area in Brazil, including their several shipping ports and comprising several states. Crude waxes collected from as large an area as this will be different not only because of the natural climatic differences, but also will vary in quality because of the different methods of collection in different communities, care with which the wax is handled, and integrity of the producer.

Beeswax, as another illustration, originates in Canada, Mexico, South America, Africa, and in fact, in all parts of the world with the possible exception of Asia.

We will not go into the well known facts as to how waxes are harvested and shipped, but rather will try to concentrate on how they are purchased.

Carnauba wax is ordinarily purchased in 10 to 50 ton lots through an American broker who is the New York representative of the Brazilian exporters and brokers. This American broker will try to sell and interest American wax importers and refiners in the offers which are sent to him almost daily. Depending on the supply and demand for these waxes, the same as in any other commodity, the market price is established. The free market in waxes has in recent years been disturbed by governmental support programs in Brazil and by financial restrictions imposed on the Brazilians. In addition to these restrictions, which were imposed artificially on free trade relations, great disturbances were caused and created by the Brazilian's lack of obedience for his own laws. It was not a matter of being able to sell the wax at market prices or at established floor prices, but rather how could the Brazilian exporter get around these prices, and corner a larger share of the market. We believe that

this situation has been largely eliminated, although not completely, and for this reason we have had in recent months a more stable price structure on natural waxes.

In order to offset some of the risks that the Brazilian exporter had to take, he paid very little attention to the quality of the wax and, as a matter of fact, in his desire to reduce costs and remain competitive, manipulation and adulteration of the wax were increased steadily over the years.

Even though various regions in Brazil may have well established reputations, we cannot afford simply to take either a shipper or a region at its face value or to accept this reputation in place of definite specifications. We do not believe in "good, beautiful Ceara;" "gorgeous Piaui;" in "Parnahyba in original bags," although some trend and indication can be expected from these phrases. We believe only, at this time, in our own tests and experiences. We believe to a great extent in the reliability of certain suppliers, but only in those who will guarantee the wax and honor legitimate claims. American importers and refiners have, over a period of years accumulated a vast knowledge of reliable and unreliable suppliers, and we therefore do not want to make the blanket accusation that all Brazilians are bad and all Americans are good. Many of the present difficulties can be directly traced to American wax refiners who have tried to cut corners in order to make a sale. This can only be done in one of two ways: either by adding something that doesn't belong in the wax, or by not doing as thorough and careful a job as should be expected of a reliable refiner. However much of the fault lies not with Brazilians or with the American wax refiners, but with some American consumers who are continually holding one quotation against another without setting up specifications. This practice causes the industry as a whole to downgrade the waxes instead of trying to improve and upgrade them through continuous research. So

much for purchasing problems.

Testing & Specs.

ALL natural waxes which we purchase for refining are first tested against standard specifications which we have set up for the various waxes. These purchase specifications establish three points.

1. The identity of the wax.
2. The amount of impurities.
3. The general quality of the wax.

An important phase of the testing of waxes is accurate sampling. This is important regardless of whether the wax is good or bad. If it is good, accurate samples help in pre-refining tests. If it is bad, possible arbitration or litigation may depend on the care with which the samples were drawn and whether they are representative of the entire lot. We consider only sealed samples officially drawn as a satisfactory basis for testing.

To establish the identity of the wax, we determine the melting point, acid value, saponification value, and hydrocarbon content. This latter value is important because certain crudes contain an abnormally high amount of hydrocarbons and also if this hydrocarbon content is not definitely established, the acid number or the saponification number is of little value in establishing the identity or purity of the wax. However, once the hydrocarbon content is known to be normal for a given wax the other values then serve as a good means of establishing the identity and freedom from adulteration. Based on these identity tests, lots of waxes are either rejected or accepted for further testing.

Lots which pass the first identity test are next tested for impurities insoluble in benzene, as well as content of moisture and volatile matter. The results of these tests will give us a very good indication of what the refining losses will be when these impurities are removed. However, the completion of these tests will not give us an indication

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Aerosol Survey . . .

Number of retail stores stocking aerosols continued to grow in 1954. Du Pont survey shows 88% stock at least one type aerosol.

THE steady yearly growth in the number of retail stores stocking aerosol products continued through 1954, when it was reported 88 percent of all dealers surveyed reported they stocked at least one type aerosol product. The continued growth in the number of stores stocking aerosols was reported by every type of outlet surveyed, which included all of the major kinds of stores. The degree of growth in the past two years varied by type of outlet.

These and other statistics on the aerosol market are contained in the 1954 Du Pont dealer survey of aerosol stocking, selling and promotion at the retail level. The survey was conducted in September, 1954 among 1983 retail outlets in 61 U. S. cities having populations of 50,000 or more. The survey was conducted for the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del., producers and marketers of "Freon" aerosol propellents. The results of the survey were revealed during the 41st annual convention of the Chemical Specialties Manufacturers Assn. in New York, Dec. 8. Copies of the complete report are available from the Kinetic Chemicals Division of Du Pont, at Wilmington 98, Del.

A similar survey was conducted in 1952. The 1953 survey covered the consumer reaction to aerosols. Dealers and consumers are surveyed in alternate years.

Spectacular gains in the percentage of stores handling aerosols since 1952 are reported and illustrated in the survey. The percent-

age of department stores handling aerosols rose from 65 in 1952 to 88 in 1954; grocery stores gained from 76 percent in 1952 to 93 percent in 1954; variety stores went from 70 percent in '52 to 99 percent in 1954. Drug stores, reporting 87 percent in 1952 gained to 99 percent in 1954, hardware stores stocking aerosols climbed from 88 percent in 1952 to 97 percent last year. Gaining, but at a slower pace were service stations stocking aerosols. These rose from 46 percent in 1952 to 52 percent in 1954.

Of general types of aerosol products stocked, the survey shows that 98 percent of drug stores stocking aerosols carry both household and personal type products; 47 percent of department stores, 67 percent of grocery stores, and 88 percent of variety stores. On the other hand, 87% of hardware stores and 49% of the service stations carry household products only.

Insecticides continue to be the mostly commonly stocked aerosol product in all types of retail outlets, with room deodorants and moth-proofers a close second. The types of outlets and the percentages of those stocking aerosol insecticides for flying insects reported in the survey include: drug stores, 94%; department stores, 66%; grocery stores, 89%; hardware stores, 92%; variety stores, 79%. Types and percentages of retail outlets stocking aerosol insecticides for crawling insects were given as: drug stores, 95%; department stores, 63%; grocery stores, 81 percent; hardware stores, 90 percent; variety stores,

68% and service stations, 66 percent.

Aerosol room deodorants, in second place, were stocked by following percentages by dealers stocking pressure products: drug stores, 94%; department stores, 60%; grocery stores, 74%; hardware stores, 64%; variety stores, 48%; and service stations, 29%.

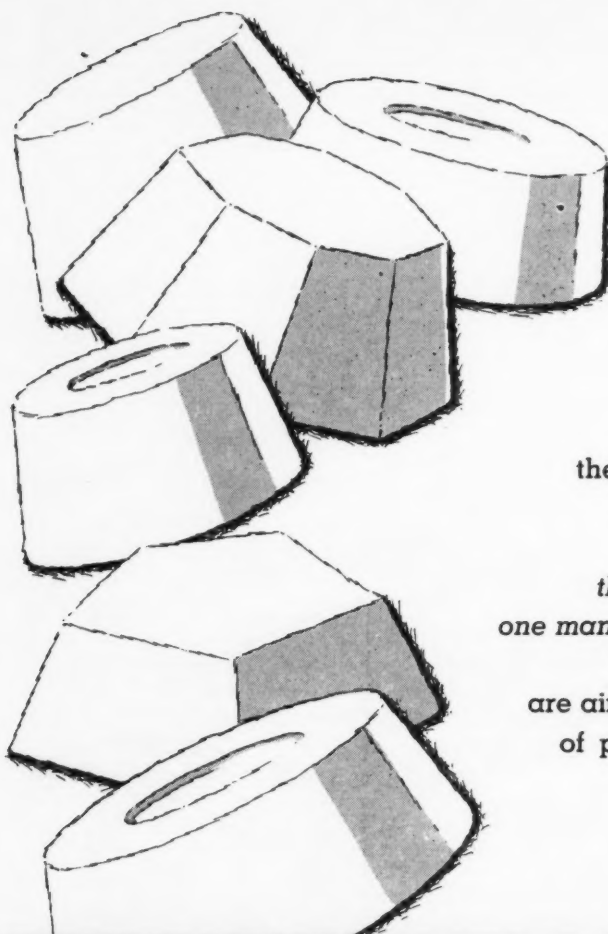
Shaving creams are the most important of the personal aerosol products in terms of percentages of dealers stocking them. Of all dealers who stock aerosols, shaving creams are carried by: drug stores, 99%; department stores, 70%; grocery stores, 14% and variety stores, 21%. In the same order the percentage of dealers stocking hair lacquers were given as 97, 73, 49, and 82.

The main reason given by dealers for not stocking an aerosol product is that it is not in his line.

More than half of all household products sold for the control of flying and crawling insects were aerosols in all types of outlets excepting variety stores. Percentages ran from 35 in variety stores to 88 in service stations for products controlling flying insects; the range was 39% in variety stores to 82% in service stations for aerosol insecticides for crawling insects, the survey shows. In every case the percentages gained in 1954, as compared with 1952. Similarly, room deodorants and moth proofers of the aerosol type were the products of choice by wide and growing margins in all six types of outlets in 1954.

Almost 40 percent of all shaving products sold by dealers who stock aerosol products are of the aerosol type. This represents about a four-fold gain since 1952. In 1954, of 100 sales of a personal product such as shaving cream by a dealer stocking aerosol products, 48% of the sales were aerosols in drug stores, 40% in department stores, 40% in grocery stores and 31% in variety stores. In 1952, these aerosol sales by percentages and types of retail outlets in the same sequence as above were: 10%;

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CSMA Meeting (From Page 129)

an invaluable service to both yourselves and to all of us who buy your products," Mr. Fassett concluded.

"Restaurant Requirements" for cleaning materials were outlined by J. F. Christi of Childs Restaurants, Long Island City, N. Y.

In airline operation, cleaning methods and materials must be highly efficient for reasons of safety, as well as economy. B. L. Southwick of American Airlines, Inc., Tulsa, Okla., stated. Cleaning materials used by airlines were divided into four main groups by Mr. Southwick. These include: compounds used on plane exteriors, compounds used to clean interiors, engine cleaning materials and plant maintenance materials. Mr. Southwick's paper begins on another page of this issue.

Waxes & Floor Finishes

THE Waxes and Floor Finishes Division met the morning of Dec. 7, under the chairmanship of A. E. Budner, S. C. Johnson & Son, Inc., Racine, Wis., division chairman. "2-Amino-2-Methyl-1-Propanol as an Emulsifying Agent in Water-Wax Emulsions" by J. A. Frump, Commercial Solvents Corp., Terre Haute, Ind., was the first paper on this program. AMP oleate was shown to be an effective emulsifying agent used in lower concentrations than triethanolamine and morpholine. Comparative tests show AMP to yield films of good water resistance and excellent removability. Significant variations in the concentration of the emulsifier greatly affect the leveling of the applied film. The critical range for AMP is rather narrow and poor leveling can result from the use of unsuitable amounts of emulsifier. When shellac or other leveling agents are incorporated in the formula the critical range is broadened and good leveling and high gloss result. AMP films rapidly lose tackiness and gain in abrasion resistance by the addition of either shellac or shellac substitutes. Floor wax emulsions prepared with AMP are stable to freeze-thaw cycles and to accelerated storage tests.

Charles J. Marsel, Department of Chemical Engineering, New York University, New York, delivered a paper on "Fischer-Tropsch Waxes." The history of the F-T process was outlined starting with its discovery by Franz Fischer and Hans Tropsch and the first unit set up by Ruhr-Chemie in 1923. Development of the process in Germany and the United States was traced, showing the shifting of emphasis towards wax production after the second world war. A new plant is currently being constructed in the Union of South Africa by the SASSO Corp., due to be in production by June 1955. A flowsheet of the Ruhr-Chemie

process was shown. New process developments have resulted in a series of modified waxes with varying properties suitable for a wide range of applications. Physical and chemical characteristics of some waxes available in the United States were presented. These include the "Duroxon" series, soft products which can be used as emulsifiers just like ozokerite and the "FT Waxes" which are hard and act as melting point boosters like carnauba. Detailed data on uses and typical formulations were included in the paper.

The third presentation in this session dealt with "Specifications for the Chemical Specialties Industry" by F. E. Chapman, S. C. Johnson & Son, Inc., Racine, Wis. Mr. Chapman's paper appeared in full in the December, 1954, issue of *Soap & Chemical Specialties*.

"Purchasing, Refining and Testing of Vegetable Waxes" by James Herman and George R. Freund, Cornelius Products Co., New York, was presented by Mr. Freund. Sampling and testing procedures were described in detail and criteria for the purchaser of vegetable waxes laid down. The need for specifications and the importance of mutual confidence in the wax trade were emphasized. The paper appears in full elsewhere in this issue.

The session was concluded by H. J. Mellan, Durez Plastics and Chemicals, Inc., North Tonawanda, N.Y., who reported on the work of the CSMA waxes and floor finishes scientific committee, of which he is chairman.

Award Presentations

TOP award in the aerosol package contest went to Lilly "Dache Invisible Net" hair spray. The Dache spray, product of General Beauty Prod-

ucts, Inc., New York, also won first place in the hair preparations class. Winners of the other nine classifications in the third annual aerosol packaging contest, for which Frederick G. Lodes of Precision Valve Corp., Yonkers, N. Y., was chairman, were announced at the post luncheon session, Dec. 7. Representatives of firms having winners in the contest were presented with plaques. Of the 282 aerosol packages entered, there were those of producers and marketers in Canada, England, Mexico, Japan, France and Germany, in addition to the United States. Entries represented most of the 65 different types of products now available.

Winners in the ten product classifications, in addition to the Dache hair spray, were:

Insecticides, "Fly Tox" insecticide aerosol of Canada Rex Spray Co., Ltd., Brighton, Ontario, Canada; Room deodorants, "Mist" air deodorant of Airken, Inc., New York; Shave products, "Yardley Shaving Foam" of Yardley of London, Inc., New York; Miscellaneous personal products, "Sardi Hand Cream" of Walgreen Drug Stores, Chicago; Paint Products, "Safe-T-Strip" paint remover of Bostwick Laboratories, Inc., Bridgeport, Conn.; Miscellaneous household products, "GlasSpray" glass cleaner of WolcoSpray, Inc., Hartford, Conn.; Industrial products, "Gun Guard" gun and reel oil of Mitchell Chemical Co., Stratford, Conn.; Artificial snow, "Xmas Snow" of Plasti-Kote, Inc., Cleveland; and glass and plastic containers, "Parfum Corday" of Parfums Corday, Inc., New York.

Eye appeal of the packages, particularly as affecting impulse purchases and label designs which at a glance informed prospective buyers of the end use of the products, were major factors

Miss Lilly Dache receives from Frederick J. Lodes of Precision Valve Co., Yonkers, N.Y., plaque for winning top honors in third annual aerosol packaging contest sponsored by the Chemical Specialties Manufacturers Association. In addition to winning the grand award as "best in the show," "Dache Invisible Net," a product of General Beauty Products, Inc., New York, also was judged top product in the hair preparations class. Mr. Lodes was chairman of the third annual aerosol festival and made the presentations to the winners on Dec. 7 during the 41st annual C.S.M.A. meeting.



in the choice of the top packages in each case, contest judges said. Judges were: Dr. Ephraim Freedman, director of Macy's Bureau of Standards, New York; A. C. Burgund, vice-president and New York manager of Carr-Lowrey Glass Co., Baltimore; Alexander Robbie, president of Alexander Robbie, Inc., New York art and advertising agency, and Miss Audrey Noxon, New York package designer.

Achievement Award

FOR their work in developing aerosol insecticides and thus pioneering what eventually became a \$200 million dollar a year industry, Dr. Lyle D. Goodhue, now of Phillips Petroleum Co., Bartlesville, Okla., and William N. Sullivan, Jr., of the U. S. Department of Agriculture, were presented with the 1954 CSMA Achievement Award at the luncheon, Dec. 7. The presentation was made to the two former U. S. Department of Agriculture scientists by H. R. Shepherd, chairman of the administrative committee of the Aerosol Division of C.S.M.A. and vice-president of Connecticut Chemical Research Corp., Bridgeport, Conn.

In accepting his plaque Dr. Goodhue thanked the association and said he greatly appreciated the recognition of his and Mr. Sullivan's work. Mr. Sullivan said he was pleased and proud to receive the 1954 achievement award, on receiving his plaque.

At the short post luncheon session on Dec. 7, new officers and directors were elected and the amendment to the constitution and by-laws was unanimously approved.

Aerosol Division

ASIMPLE, quick way of determining pressure, spray and solubility characteristics of alcohol-propellant solutions, through the use of triangular coordinate charts, was outlined to the Aerosol Division at its meeting the afternoon of Dec. 7. The data are contained in the paper "Propellant for Low Pressure Cosmetic Aerosols" by Fred T. Reed of the Kinetic laboratory of E. I. du Pont de Nemours & Co., Wilmington, Del. The need for such data has arisen as a result of the growth of aerosol colognes and related products packaged in glass bottles. The charts are designed specifically for the development of aerosol colognes and related cosmetic products for packaging in glass containers. They are said to eliminate much of the trial and error work for the initial development of such products.

Systems covered by the chart include "Freon 12" dichlorodifluoromethane—"Freon 11" trichloromonomethane-alcohol solutions and "Freon 12"—"Freon 114" dichlorotetrafluoroethane-alcohol solutions.

While the triangular coordinate charts have been designed primarily for predicting vapor pressures up to 25 pounds per square inch gage at 70° Fahrenheit—maximum pressure per-

mitted with glass aerosol containers at the present time—they can be extrapolated for higher pressures permitted in metal containers.



mitted with glass aerosol containers at the present time—they can be extrapolated for higher pressures permitted in metal containers.

A joint approach to the problem of safety in aerosols, by a toxicologist and an aerosol specialist, was described in the paper, "Biological Testing of Aerosols for Safety" by A. Haldane Gee of Foster D. Snell, Inc., New York, and George W. Fiero, Esso Standard Oil Co., New York. Safeguards for aerosol products, based on biological tests, are available for nearly every product presently on the market, according to the authors. Elaborate testing programs may be necessary in some cases before a new product can be released for consumer use. In many cases, however, standard formulas are available for products safe for use under ordinary conditions.

Complete safety should be assured under all conditions for aerosol products intended for adornment or ornamentation, the authors stated. In products intended as protective agents or for the elimination of pests, it may be necessary to use ingredients that call for some caution on the part of the user. The four primary components of an aerosol package; propellant, solvent, perfume and active ingredient, are available in safe forms for consumer products, the speakers said.

A new mothproofing development, an aerosol insecticide employing "Strobane," was described in a paper by J. S. Wolff, biochemical sales department manager of B. F. Goodrich Chemical Co., Cleveland and Dr. Joseph B.



Left: Also elected to serve on board for three years are Dr. E. G. Young, (left), E. I. du Pont de Nemours & Co., Wilmington, Del., and Dr. Alfred Weed, John Powell & Co., Division of Olin - Mathieson Chemical Corp., New York.

Moore, McLaughlin Gormley King Co., Minneapolis. The paper, "Engineering Features of Strobane Mothproofing Pressurized Sprays," and delivered by Mr. Wolff, disclosed that "Strobane," an insecticide introduced about a year and a half ago by Goodrich, is highly effective against both clothes moths and carpet beetles. Features of "Strobane" include a mild pine odor, freedom of staining on fabrics and the absence of objectionable residue on material that has been treated. Mothproofing solutions based on the insecticide can be applied conveniently and effectively by the housewife from an aerosol type dispenser. Formulated easily without odorous secondary solvents, "Strobane" will give complete protection to woollens during a storage period of one year, according to Mr. Wolff. The extensive testing program conducted by B. F. Goodrich Chemical Co. to determine the most effective spray formulations and methods of delivery were outlined by Mr. Wolff.

Disinfectant & Sanitizers

THE Disinfectant and Sanitizers' Division, meeting the afternoon of Dec. 7, held a forum on the book "Antiseptics, Disinfectants, Fungicides and Sterilization," edited by George F. Reddish, Lambert Pharmacal Co., St. Louis, Mo., who served as moderator. The various contributions to the forum followed closely the corresponding sections of the book, offering the information in concentrated form. Participants were: L. S. Stuart, U.S. Department of Agriculture, Washington, D.C., on "Methods of Testing Disinfectants";

Kurt A. Oster, McKesson & Robbins, Inc., Bridgeport, Conn., on "Fungistatic and Fungicidal Test Methods"; E. G. Klarmann, Lehn & Fink Products Corp., New York, on "Phenolic Compounds"; W. A. Hadfield, Pennsylvania Salt Manufacturing Co., Philadelphia, on "Chlorine and Chlorine Compounds"; John W. Klimek, Sterling-Winthrop Foundation, Rensselaer, N.Y., on "Quaternary Ammonium Compounds"; and Louis Gersfeld, Philadelphia College of Pharmacy & Science, Philadelphia, on "Iodine."

"Masters of Maintenance," a film on aviation maintenance produced by American Airlines, Terre Haute, Ind., and another, bearing the title, "Tight Little Isle," were shown the afternoon of Dec. 7. The final social event of the day was the company open house period from 6:00 to 9:00 p.m.

General Session

R EPORTS of the officers of CSMA marked the opening feature of the general session, the morning of Dec. 8. In his address as CSMA president, Melvin Fuld of Fuld Brothers, Inc., Baltimore, predicted that there would be no boom—or bust—in 1955, but that it would be a year of competitive prosperity. Sales of chemical specialties at manufacturers' levels are in excess of one billion dollars, according to latest estimates, Mr. Fuld stated. In 1955, the chemical specialty industry will spend more for plant equipment and promotion than ever before.

A 26.47 percent increase in production of aerosols was forecast for 1955 by Mr. Fuld. He predicted a production of more than 253 million units.

An increase of about eight percent in the industrial business of the floor wax industry in the coming year is anticipated by Mr. Fuld.

Greater industrial consumption of soaps and synthetic detergents, ranging from four to seven percent over 1954, was predicted by the CSMA president, who also forecast a moderate gain in sales for the insecticide industry. Although handicapped by statistical interpretation, Mr. Fuld estimated the household insecticide industry volume at between \$110 and \$120 million annually, with about half of that represented by aerosol dispensed products.

A 10 percent gain for products of the Disinfectant and Sanitizers Division should be shown in the coming year, Mr. Fuld said, predicated his forecast on the greater emphasis to be given to promoting the "Cleanliness Theme."

Automotive products will be sold in greater volume in 1955 than in 1954, based on automobile production, consumer spending ability, national prosperity and other conditions, Mr. Fuld stated. The "do-it-yourself" trend and cleanliness promotions will also help to put '55 automotive sales figures ahead of those for 1954, Mr. Fuld indicated.

Mr. Fuld reviewed "the accomplishments of the past," including the

move of the CSMA to new quarters, cooperative work with other associations and industries, publicity on the need for waxing vinyl floors, product surveys of the aerosol, insecticide and automotive divisions, the greatest increase in membership in CSMA in any one year, new official test linoleum and test asphalt tile, issuance of two proceedings of meetings and distribution of "Impression of Copy Control."

Looking to future activities, Mr. Fuld underlined the need for a public relations program. He also mentioned that CSMA may have to consider a new dues set up—a basic administrative expense and a specific sum for public relations based on sales, production units, etc., per divisional contribution. The board of governors of CSMA has been studying this problem and a committee has been named to investigate it.

In his review of the year as secretary of CSMA, H. W. Hamilton reported that membership in the association is the largest in its history: 342 members, 251 of which are active and 91 associate.

The publication and distribution of Revision No. 5 of the Compilation of Economic Poisons Laws was mentioned by Mr. Hamilton as one of the highlights of the legislative activities of the CSMA. In addition to the work of mailing out copies of regulations for labeling of hazardous products in New York State and New York City, as well as those of New Jersey, the association has taken an active part in precautionary labeling. The surveys of the aerosol and insecticide groups of CSMA, and that of the brake fluid industry were cited by Mr. Hamilton as outstanding contributions performed under CSMA auspices. Standardized testing materials for insecticides, insecticide aerosols, linoleum, asphalt tile, coupons for brake fluids and peptone for bacterial culture media were made available during the past year.

The activities of the six divisions of CSMA were reviewed by Mr. Hamilton, who in conclusion stated that the "last year has been one of the most progressive years in the history of CSMA. During the next year, it is anticipated that all of the many successful activities of the past will be continued. In addition, it is expected that new publicity plans and programs will be in progress to further the use of chemical specialties, some of the methods of analysis having CSMA approval will be collated, a further development of the availability of materials for speakers on chemical specialties; and many lesser plans for improvement of service to members will be realized."

In place of the customary report of the legislative committee chairman, W. S. Jessop of U. S. Sanitary Specialties Corp., Chicago, chairman, spoke on the "incursions by the Executive branch of government into the legislative and judicial fields." This Mr. Jessop referred to the "New Depotism," the history of which he traced back through

English history to 1066 A.D. and the Battle of Hastings.

"No industry does more work with the Bureau of Explosives of the Association of American Railroads than the chemical specialties industry," H. A. Campbell of the Bureau told the general session, Dec. 8. Methods of testing and types of containers to be used for packaging aerosols have been worked out as a result of close cooperation between CSMA and the Bureau, Mr. Campbell stated. He said he was disappointed that some producers of aerosols still violated the regulations covering them. These regulations were written in cooperation with CSMA and the Bureau and cover flammable and nonflammable aerosols. These regulations must be complied with, Mr. Campbell stated, adding that accidents resulting from failure to observe the regulations bring about demands for new regulations or changes in the regulations such as those advocated by certain municipalities. This is a serious problem, Mr. Campbell concluded.

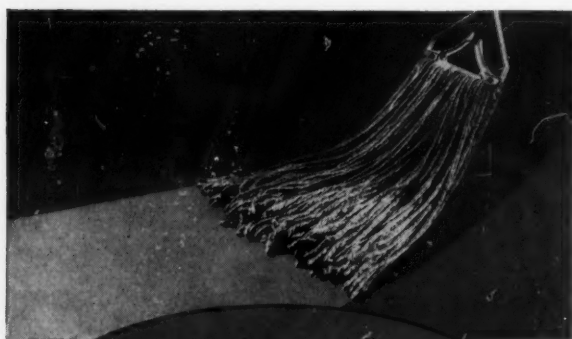
There is a "need for closer cooperation between the advertising and sales departments of packaging firms and transportation people," Lawrence North, of the Official Classification Committee of the Consolidated Freight Traffic Bureau, New York, stated. In his talk, entitled, "Classification of Shipments of Materials Other than Flammable in New and Used Containers," Mr. North also revealed that the new drum industry has a proposal pending before it that would require the name of the reconditioner to appear on reconditioned drums. He also explained the official classification area for various sections of the U. S. The importance of correctly classifying merchandise to be shipped cannot be overemphasized, he stated. Adequate protection, generally more than the maximum standards set up in the official classification, was urged by Mr. North to avoid damage to merchandise and consequent expensive and time consuming negotiations over claims.

There is no foreseeable end in the defense effort of the U. S. in the present state of the world, Osgood V. Tracy, director and general manager of Chemical Products Development of Esso Standard Oil Co., and president of Enjay Co., New York, told the general session. Thus, there is a need for continued cooperation between industry, and the chemical industry in particular, and government in the defense effort, Mr. Tracy said. He urged companies to permit their executives to serve the government in joint government-industry enterprises connected with the defense effort.

"We can't afford to leave the relationship between the government and industry to the big companies alone," Mr. Tracy said. This experience broadens men who are loaned to government, he concluded.

The experience of Reilly Tar & Chemical Corp., Indianapolis, in the pro-

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AND GRIME... QUICKLY, COMPLETELY**



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SOAP and CHEMICAL SPECIALTIES

'55
duction of pyridine and its by-products was described by F. E. Cislak, director of research for Reilly, and final speaker of the general sessions.

Entomology Citation

A CITATION commemorating 100 years of professional entomology in the U. S. was presented at the final luncheon meeting Dec. 8 to the U. S. Department of Agriculture, Washington, D. C. Dr. H. L. Haller, director of crops research of the Agricultural Research Division, Washington, D. C., received the plaque on behalf of the U.S.D.A. In presenting the citation George W. Fiero, chairman of the Insecticide Division of CSMA, noted that prior to 1854, entomology in the U. S. had only "amateur status, being conducted more or less as a hobby by physicians, biologists and others." Today, he said there are more than 4500 technically trained professional entomologists in U. S. government, industry and educational institutions.

"Because of them," Dr. Fiero pointed out, "we have more food, more clothing, better health and, by control of many nuisance insects, better dispositions."

In accepting the plaque, Dr. Haller said that the accomplishments of the past 100 years in insect control have been especially outstanding in the chemical specialties industry. Many accomplishments have been made possible by cooperation between industry and the U. S. Department of Agriculture, Dr. Haller said. "I believe we can look forward to continuation of progress and be able to work faster in controlling injurious insects," Dr. Haller concluded.

Aerosol Division

THE production and marketing of aerosol touch-up paints were covered in two talks during the joint session of the Aerosol and Automotive Divisions, the afternoon of Dec. 8. J. W. Bampton of Krylon, Inc., Philadelphia, whose talk was entitled "Aerosol Specialties in the Automotive Industry," discussed problems in producing automobile touch up colors.

The size of the market may be indicated by the fact that in 1954 46 million passenger cars and 10 million trucks were registered. This market plus the do-it-yourself trend had helped greatly in the expansion of automotive aerosol touch-up paints and enamels, Mr. Bampton said. Characteristics of a good aerosol touch-up paint, enamel or lacquer include: good color match; quick drying; good adhesion; compatibility with the original color, good finish and an operative valve. In addition, the aerosol must produce a fine spray, without droplets, and the product must have good shelf-life. The aerosol touch-up kit should contain a spray dispenser of the color coating, an emery cloth, a bottle of solvent, a spray dispenser of quick drying metal primer and rubbing compound to work in the new touch up

enamel, Mr. Bampton stated. He concluded by cautioning against going into the paint aerosol field without adequate background in both the paint and aerosol industries.

Robert R. Elliott of Tempo Products Co., Cleveland, declared that the aerosol industry can reach the billion dollar mark by 1960. The first standard set for aerosol touch-up paints was quality—the product had to match the original paint. The price factor is secondary. The big problem with the original marketing of touch-up aerosol paints was to convince the public that the aerosols would do a professional job. The first market for the aerosol touch-up paints and enamels was the new car dealer. Mr. Elliott showed a counter display featuring a line of colors that are reproduced on the caps of the aerosol dispensers as one type of merchandising approach to the touch-up market. Educational folders are also used to promote these products. The automotive dealer has to be educated to the use of aerosol touch-up enamels and paints, and the argument that these products injure his spray painting service department have to be overcome.

A large and growing field for touch-up aerosols is the outboard motor market, according to Mr. Elliott. His company is expanding its activities in this field in 1955, he stated.

The most recent development in the packaging of chemicals,—the new sprayable plastic coatings,—was described in the paper the "Chemical Package" by Stanley W. Coryell, Harold G. Lederer and Mark Wilson of R. M. Hollingshead Corp., Camden, N. J. The growing importance of package design was mentioned by Mr. Coryell who pointed out that "better results (will be gotten) from a designer who thinks in terms of the whole problem of fitting a product to the consumer (rather) than one who is intent only on making the product more beautiful."

The biennial survey of retail dealers' sales of aerosol products was a three part presentation featuring T. D. Johnson, manager of aerosol propellant sales; D. C. McSorley, advertising manager, Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington, Del.; and Ben Gedalecia, supervisor of research, Batten, Barton, Durstine & Osborn, Inc., New York. Mr. Johnson explained that the purpose of the survey was to determine how retail dealers are selling aerosol products; how they stock them, what they think of them and their methods of selling them.

Mr. Gedalecia explained the mechanics of the survey. He told that it was conducted in 61 U. S. cities having populations of over 50,000; that 1983 dealers were questioned, and of these 347 were drug stores, 330 were grocery stores, 330 were hardware stores, 331 department stores and 317 service stations. The study was conducted in Sept. 1954, following pretests to study

the survey methods. Interviews with retailers averaged 30 minutes, and if more than one department in a store sold aerosol products the buyer in each department was questioned. No clerks were interviewed.

The meaning, purpose and implications of the survey were discussed by Don McSorley. A complete report of Mr. McSorley's talk appears beginning on another page of this issue.

The newest development in aerosols, the dispensing of powder form products was discussed in a paper by Walter C. Beard, Jr., of Risdon Manufacturing Co., Naugatuck, Conn. Certain aerosol products give better performance and are more desirable when dispensed in powdered form, Mr. Beard stated. More uniform dispensing and absence of contamination are among the advantages claimed for the method. Drawbacks include clogging of the valve and leaking. Clogging, a more serious problem, may be caused by: a.) large or needle shape particles; b.) use of material having only limited solubility in the propellant system, and c.) agglomerative sedimentation of the product.

Insecticide Division

HOUSE flies highly resistant to the chlorinated hydrocarbons are readily susceptible to organic phosphorus compounds, which are thus gaining in importance in fly control, H. F. Schoof of the technical development laboratories of the Public Health Service, Department of Health, Education and Welfare, Savannah, Ga., reported at the Insecticide Division session the afternoon of Dec. 8. No evidence to date indicates that the house fly (*Musca Domestica*) is developing any resistance to these chemicals. Industry has produced organic phosphorus compounds which have toxicity comparable to DDT, according to the Schoof paper, "The Use of Organic Phosphorus Compounds in Fly Control." Scientists have devised improved methods of application of highly toxic materials such as parathion. Present day usage includes application as poison bait, residual bait sprays, impregnated cords, larvicides and space sprays. Chief usage disadvantage of the compounds is cost and short duration of effectiveness for residual-bait applications, Mr. Schoof stated.

"Mites as Household Pests" were discussed in a paper of that title by Edward W. Baker, Insect Identification and Parasite Introduction Section, Entomology Research Branch, U.S.D.A. Mr. Baker reviewed the groups into which mites as household pests are divided and then discussed their importance as disease carriers, causes of dermatitis, and contaminants of food. Methods of control were also outlined.

The British view of pyrethrins was expressed in a paper by C. Potter, M. Elliott and J. Ward of the Rothamsted Experimental Station, Harpenden, Hertford, Eng. The paper, read by Thomas H. Harris of the registration

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section of the U.S.D.A., concluded that there is no prospect that pyrethrum will be replaced by any substitute in the near future. Use of pyrethrum is increasing in Britain and will continue to do so for some time.

Waxes, Floor Finishes

AGERMICIDAL floor wax was discussed in the paper, "Biologically Active Floor Coatings" by Kurt Wasserman of Trio Chemical Works, Inc., Brooklyn. Mr. Wasserman's paper begins on another page in this issue.

A "Device for Sampling Wax Emulsions During Kettle Processing" was described in a paper of that name by Frank J. Pollnow, Jr., of Vestal, Inc., St. Louis. The chief advantage offered by the device is in obtaining samples which approximate very closely the state of the emulsion mass in temperature and other properties at the instant of sampling.

A panel discussion: "The Role of ASTM as a Standard Setting Organization in the Chemical Industry," for which Bayard S. Johnson of Franklin Research Co., Philadelphia, was moderator, concluded the Dec. 8 afternoon session of the Waxes and Floor Finishes Division.

Samuel F. Etris of the American Society for Testing Materials (ASTM), Philadelphia, explaining "How ASTM Committees Operate," stated that "Standardization has long ceased to be merely desirable; it has become a necessity." He described the establishment of a technical committee, following the determination by the ASTM board of directors that standardization is needed in a particular field and that those within the field support such a program. If the board approves the idea a representative group in the field is invited to propose the scope and membership of the technical committee. Regulations concerning the committee membership are based on a balance between the producer and consumer-general interest.

"The Organization and History of ASTM Committee D-21" was reviewed by Dr. W. W. Walton of the National Bureau of Standards, Washington, D.C. Committee D-21, Wax Polishes and Related Materials, was approved in January, 1950, and held its first organizational meeting on April 14, 1950. The original committee consisted of 36 members; it now has 58 members. Considerable emphasis has been given to water emulsion waxes, but the work is beginning to broaden and will include solvent type waxes, automobile waxes and other special polishes, Dr. Walton stated.

The activities of various subcommittees of ASTM Committee D-21 were outlined as follows:

Subcommittee I, Nomenclature, by J. T. Hohnstine of Boyle-Midway, Inc., Cranford, N. J.: Scope of subcommittee I is standardizing of definitions or descriptions of terms used in the development, manufacture or evaluation of wax polishes and related materials necessary

for the proper functioning of Committee D-21.

Agreement has been reached by the subcommittee on several terms and definitions, among these being wax, wax product, volatile solvent, soil retention and total solids. Still being debated are the terms: water spotting, mar and scuff. Other terms and words before the subcommittee are soil acceptance, leveling, spreading, water emulsion wax, liquid wax, ceresin, microcrystalline, etc.

Subcommittee IV, reported on by C. S. Kimball, Foster D. Snell, Inc., New York, is concerned with performance testing of wax polishes and related materials. Subcommittee IV has published detailed methods for determining of static and dynamic coefficient of friction of floor waxes using the James and Sigler machines. This was the first publication of details for using the James machine. The method for using the Sigler machine was brought up to date and secondary standards were established.

Subcommittee V, by William H. Joy, American Telephone & Telegraph Co., New York, has had its scope expanded to include raw materials in accordance with the decision of the executive committee that it would be desirable to have only one subcommittee dealing with specification matters. Originally the scope of the subcommittee was defined as, "The development and preparation of specifications for finished wax polishes and related materials."

Progress has been slow on finished product specifications, according to Mr. Joy, because of expectation that ASTM would come up with better but not bigger specifications than ever published before. The question was raised what form specifications might take. Producers were apprehensive as to what the committee might do and somewhat grudgingly consented to any specifications at all. Consumers favored specifications as a guide to their purchasing activities.

A task force was formed to draw up actual specifications. It was soon discovered that in the present state of affairs, agreement on actual numerical values was not feasible. Accordingly, the task force has drawn up a tentative specification which is really an adaptation of the significance study. Actual limits are to be filled in by the buyer and seller.

Joint Disinfectant Session

AJOINT session of the Disinfectant and Sanitizers Division and the Soap, Detergents and Sanitary Chemical Products Division was held the afternoon of Dec. 8 with G. E. Barker presiding. Kurt Albrecht, Calgon, Inc., Pittsburgh, Pa., spoke on "Application and Properties of Chlorinated Alkaline Detergents," stressing the role of these compounds in mechanical dishwashing in institutions and homes. An addition of chlorinated trisodium phosphate to

the usual polyphosphate formulations is said to increase the efficiency of these operations especially where only low temperature rinse water is available.

The development of mechanical dishwashing was handicapped until 1934 according to Mr. Albrecht, by unsuitable detergents which encouraged the build up of undesirable films. The introduction of polyphosphates controlled formation of calcium deposits and other films and encouraged the expansion of mechanical dishwashing. More recently the introduction of synthetic detergents has brought certain improvements, but the greatest progress was made in the machines themselves. Waterspotting and staining by coffee and tea however have remained major complaints. The presence of chlorinated trisodium phosphate is said to eliminate these complaints or reduce them to a minimum, where china ware is being processed and to remove stains from melamine plastic ware even when the surface is damaged. For commercial and institutional formulations 30 percent chlorinated TSP is suggested and 30 percent tripolyphosphate. For domestic use more poly and less chlorinated TSP should be used.

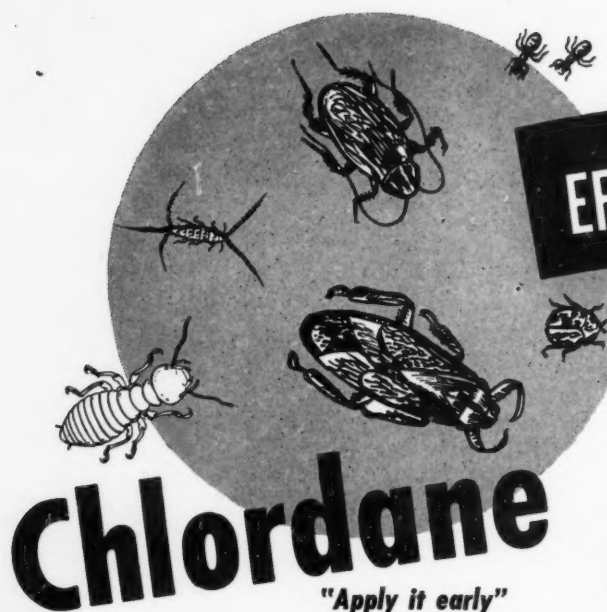
Chlorinated products of this type do exert certain corrosive action which can be inhibited by the addition of 10 percent sodium silicate. Other disadvantages are the odor released by chlorinated products, the darkening of silver and the fact that they attack aluminum and overbaked decorations on china.

Further tests may find other domestic uses for chlorinated TSP, possibly as a mild bleach and in general cleaning operations. Its high detergency even at low temperatures and its bacteriostatic properties should encourage further investigation.

"Suggested Specifications for Modern Institutional Disinfectants" by E. G. Klarmann, Lehn & Fink Products Corp., New York, was the second paper in this session. Dr. Klarman presented outlines for specifications for the "Hospital and Surgical Type" and for the "Housekeeping and Janitorial Type." For the former a broader spectrum of microbicidal activity is stipulated. Ten vital points are specified for both types, which include phenol coefficient and use-dilution tests, toxicity, etc.

L. S. Stuart of U.S.D.A. presented "Some Observations on Janitorial Use of Germicides." The paper dealt with the use of disinfectants and sanitizers in institutional and public washrooms. Odor control and protection of personnel were the chief reasons for application for these products in restrooms. Handles and fixtures were found to be more heavily contaminated than floors. Eleven products were subjected to tests. Laboratory and wash apparatus and procedure developed for this purpose were described. The speaker stressed the urgent need for standards in this field.

R. L. Stedman, Department of the Navy, Philadelphia, presented a study
(Turn to Page 169)



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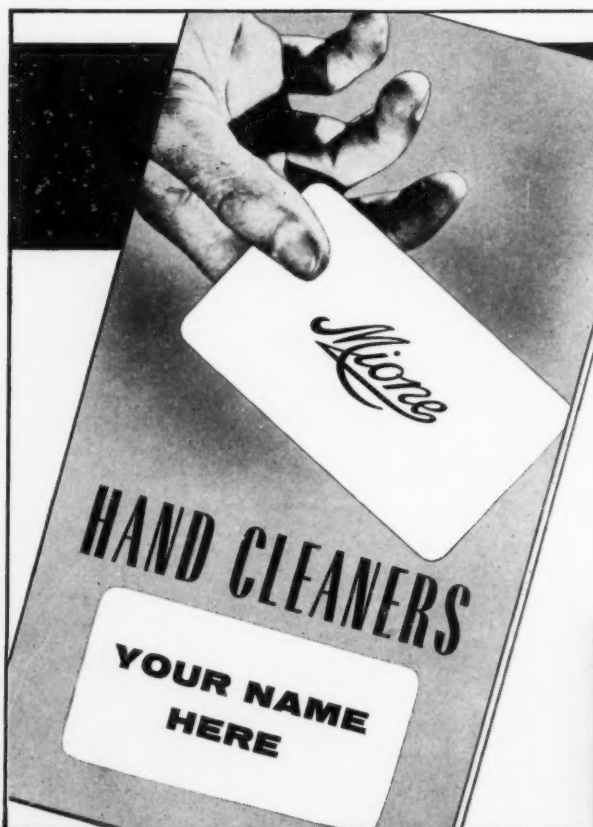
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News

Albert Selig Dies

Albert S. Selig, president of Selig Co., Atlanta, died suddenly at his home on Jan. 1. He was 58



Albert Selig

years old. A native of Atlanta, he attended Georgia Military Academy and was a graduate of the University of Georgia. Mr. Selig had been president of the firm since 1943. He succeeded his brother Simon S. Selig, Sr., who founded the Selig Co. in 1896 and headed it until his death in 1943. Albert S. Selig had been sales manager previous to his appointment as president. His experience in the business spanned 39 years. During World War I Mr. Selig served as one of the first pilots in the Naval Air Service. He was a civic leader whose interests covered a wide scope.

Surviving are his wife, the former Daisy Belle Dolan; two daughters; a sister, and several nieces and nephews, among these Simon S. Selig, Jr., executive vice president of the firm and son of the founder.

Heads Polio Appeal

Louis Gillespie, president of Gillespie-Rogers-Pyatt Co., New York, was recently appointed to head the appeal of the paint and varnish industry committee of the 1955 Greater New York campaign of the National Foundation for In-

fantile Paralysis. Members of the committee include among others Paul L. Kohnstamm, H. Kohnstamm & Co., New York; Charles Freedman, Mantrose Corp, Brooklyn, and Al Calo, John H. Calo Co., New York.

Crown Can Name Change

Crown Cork & Seal Co., Inc., Can Division, Philadelphia, is the new name of the unit formerly known as Crown Can Division.

Penick Executive Changes

Frank Seeland has been appointed manager of the insecticide division of S. B. Penick & Co., New York, it was announced last month by Harold Noble, vice president. Mr. Seeland succeeds Mr. Noble who had been manager of the division for many years and who is now on a four week business and vacation trip to South America. With Penick since 1952, Mr. Seeland has been in the insecticide field for over ten years and has helped to introduce materials such as malathion, lindane, etc.

At the same time Penick announced the appointment of Harold E. Fletcher as production manager in charge of all manufacturing operations of Penick and of New York Quinine & Chemical Works. This arrangement will consolidate

Frank Seeland



the management of facilities in Jersey City, Lyndhurst, Montville, and Newark, N. J.

Velsicol Advertising Mgr.

Lawrence E. Carls has been appointed advertising manager of Velsicol Corp., Chicago, it was an-



Lawrence E. Carls

nounced last month by John F. Kirk, vice president and director of sales. Mr. Carls was previously advertising manager for International Register Co., Chicago. He now coordinates advertising for all Velsicol products. These include the household and agricultural insecticides chlordane, heptachlor and endrin as well as industrial and insecticide solvents and saturants and industrial resins.

New Lawson Aerosol Firm

Lewis S. Lawson will head the new Lawson Chemical Products Co., Culver City, Tex., it was announced last month. The firm will specialize in the packaging of easy-to-use pressure spray products. Mr. Lawson, has specialized in pressure packing since 1948 and was formerly chief chemist for one of the large aerosol packers in the West. The new plant is set up to turn out either large or small runs according to the customer's requirements. Mr. Lawson said that the "company is ready now to assist manufacturers in developing aerosol packaging for their products, with particular emphasis on lasting pressure control."

Geigy Names Bernegger

Geigy Chemical Corp., New York, has named Rolf Bernegger manager of its plant at Cranston, R. I., it was announced recently by Charles A. Suter, executive vice president. Dr. Bernegger will continue to act as head of the plant's production department. A graduate of the Federal Institute of Technology in Zurich, Switzerland, he joined Geigy in 1952, was previous-

ly associated Cliffside Dyeing Corp. as chief chemist.

Airkem Advances Conkling

Divisional sales managers of Airkem, Inc., New York, will participate in formulating overall sales policies of the firm, it was announced recently by William H. Wheeler, president. Frank W. Conkling, assistant to the president, has been appointed general sales manager, and will coordinate these



Frank W. Conkling

activities. Mr. Conkling, who will retain his previous title as well, joined the firm in 1946 as a salesman. He has served successively as smoke odor service sales manager and director of research. Airkem's sales organization is divisionalized along market lines, with individual sales managers in charge of industrial, smoke odor, sanitary supply, and general commercial divisions.

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A trophy to be awarded annually to the pyrethrum grower in British West Africa who produces the highest quantity of pyrethrins per acre was announced recently by the Mitchell Cotts group of companies, the parent organization of which is Mitchell Cotts & Co., Ltd., London, Eng. The award to be known as the "Mitchell Cotts Pyrethrum Trophy," was presented to the Pyrethrum Board of Kenya, Dec. 4.



Sanitation Abroad Lags

Europeans are far behind Americans in the matter of sanitation and maintenance, Miss Lillian Moran, head of Moran Brush Works, Hamden, Conn., reported following her return last month from a trip to Europe. Miss Moran spent most of the month she was abroad in Italy. She sailed to Europe aboard the *SS Christofel Colombus*, returning on the *Andrea Doria*.

"There is virtually no mechanical equipment used for maintenance work abroad," Miss Moran stated. This is mainly due to the low wages paid for labor in Europe. Hand scrubbing of floors is still the accepted practice, with few floor machines being in evidence. The quality of European brushes is poor, compared with those produced in the U. S. Miss Moran pointed out.

There are few sanitary supply jobbers in European, most cleaning and maintenance supplies being sold through hardware stores. Miss Moran said she felt there is a big market in Europe for sanitary supplies, but that it was difficult to sell European countries because of dollar shortages. She commented also on the lack of soap in almost all European hotels.

— ★ —

Brenn Rotary Governor

J. L. Brenn, president of the Huntington Laboratories, Inc., Huntington, Ind., was elected District Governor of Rotary International, District 224, which com-

J. L. Brenn



prises 39 Rotary Clubs in Northern Indiana. The election took place on Dec. 3 and Mr. Brenn will serve for 1955.

At the same time, he was chosen a member of the board of directors of the Indiana Manufacturers Association. Accompanied by Mrs. Brenn, he left New York on January 7 for a two months air tour of South America. Upon his return, he plans a series of visits to the 39 Rotary Clubs in his district.

Sets Reilly Plant Fires

Fire in the Chicago plant of Reilly Tar & Chemical Co., at 2513 S. Damen Ave., on Dec. 5, caused damages estimated at \$100,000. A watchman, employed by a patrol agency to guard the plant at night, later admitted in court that he had set the blaze and also another smaller fire there Nov. 15. On both occasions, he told the judge, he bumped his head and became enraged. Police said the man was a former inmate of a mental institution.

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At the American Can Company's exhibit during recent CSMA convention in New York, looking over firm's aerosol containers, are left to right: T. E. Alwyn, vice-president, executive department of American Can Co., New York; R. P. McGhie, division head of packaging research laboratories, Colgate-Palmolive Co., Jersey City, N. J.; A. I. Gebhart, assistant director of research, Colgate; W. T. Egan, director of packaging, Colgate; and D. B. Craver, vice president in charge of sales, American Can.

USDA Issues Revised Interpretation 18

A REVISED interpretation of the warning, caution, and antidote statements required to appear on labels of economic poisons in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act was issued late last month by the U.S. Department of Agriculture.

Officials of USDA's Plant Pest Control Branch, which administers the Act, state that the revised interpretation (No. 18) differs from the original interpretation 18 of November 14, 1949, in these two major ways:

1. The listing of specific chemicals to which this interpretation applies has been brought up to date by the inclusion of 44 new precautionary label patterns.

2. Fire hazard precautions have been modified.

In addition to these new inclusions, certain changes have been made in some of the original label patterns. For example, the warnings on DDT have been simplified, while those on carbon tetrachloride have been strengthened.

Copies may be had from the Plant Pest Control Branch, Pesti-

cide Regulation Section, U. S. Department of Agriculture, Washington 25, D. C.

Precautionary statements concerning fire hazards continue to be based on the flash point of the economic poison to be labelled. However, where previously it was necessary to include on the label of formulations having flash points below 80°F. such a statement as: "Danger—Extremely flammable. Do not use or store near open flame," this warning now more nearly applies to those formulations that have flash points at or below 20°F. This warning is suggested in the revised interpretation: "Danger—Extremely flammable. Keep away from fire, sparks, and heated surfaces." For those formulations with flash points between 20 and 80 degrees, a suggested label statement is: "Warning—flammable. Keep away from heat and open flame." For flash points between 80° and 150°F., the caution "Do not use or store near heat or open flame" is acceptable.

Below are the new listings for which specific precautionary label information has been added in

the newly revised interpretation:

Aldrin, ammonium sulfamate, captan, chlordane, chloro-IPC, p-chlorophenyl dimethylurea, p-chlorophenyl - p-chlorobenzene sulfonate, p-chlorophenyl phenyl sulfone, citronella, dichlorophenyl dimethylurea, 2,4-dichlorophenyl ester of benzene sulfonic acid, di-(p-chlorophenyl) methyl carbinol, dieldrin, O, O - dimethyl-O,p-nitrophenyl thiophosphate, di-n-propyl maleate isosafrole condensate (n-propyl isomer), endrin, O - (2-[ethylmercapto] ethyl) O,O-diethyl thiophosphate, heptachlor, hexaethyl tetraphosphate, lime-sulfur solutions, lindane, malathion, maleic hydrazide, maneb, methoxychlor, methyl chloride, 2-methyl, 4-chlorophenoxyacetic acid, N-1 naphthyl phthalamic acid, 2-nitro-1, 1-bis (p-chlorophenyl) butane and/or 2-nitro-1, 1-bis (p-chlorophenyl) propane, octyl-bicyclo-heptene-dicarboximide, N-octylsulfonate of isosafrole, peracetic acid, phenylmercuric acetate, piperonyl cyclonene, 2-pivalyl-1, 3-indandione, rotenone, sesamin, sodium isopropyl zanthate, sodium trichloroacetate, sulfur, 2-(p-tertiary-butyl phenoxy) isopropyl -2- chloroethyl sulfite, tetraethyl dithionopyrophosphate, trichloroacetic acid, and warfarin.

New Iodine Germicide

An iodine type germicide that will not sting upon application and can be swallowed in quantities up to several gallons without harmful effects, was announced recently by West Disinfecting Co., Long Island City, N. Y. New "tamed iodine," as it is designated by West, will not stain, and can easily be washed off the skin and most fabrics. Rated as effective against polio virus in several hospitals and medical schools where it has been tested, "tamed" iodine has also been found to be highly effective against tuberculosis bacilla and influenza viruses. West is now making a new all-purpose germicidal iodine cleaner for in-

New "Wescodyne" iodine germicide



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FRANKLIN'S "TWENTY-ONE" WAX... truly a heavy duty wax—contains 18% solids—self-polishing. Ideal for floors subjected to heavy traffic. One coat often replaces two coats of ordinary wax, thus reduces maintenance and re-waxing costs.



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dustrial and institutional use under the trade name "Wescodyne."

"Wescodyne" is also a detergent. In solution it has a yellow-brown tint which persists as long as germicidal activity is assured; when the color fades completely, the solution is no longer effective and should be replaced. It is claimed to be effective in both warm and cold water, and hard water is said not to impair its germicidal action.

Eastern Entomologists Meet

Fly control studies were presented in various papers at the annual meeting of the Eastern Branch of the Entomological Society of America, held in New York, recently. "Tests with Organic Phosphate Insecticide for Fly Control" were described by Warren T. Johnson, University of Maryland, College Park, Md. Malathion, 4124, chlorthion, and diazinon were found to give good results in liquid baits. Malathion, diazinon, and 13/59 gave good results as dry baits, although initial kill was not as rapid. Malathion, diazinon, and 4124 were found to be best in wall sprays and effective for three or more weeks.

"Fly Control in Dairy Barns in 1954" was the subject of a paper by E. J. Hansens, Rutgers University, New Brunswick, N.J. Lindane resistant flies were still being encountered during the past season. In addition, the species *Fannia*, a fly with the tendency to hover, was presenting new problems, because it was less susceptible to residual sprays.

4124 was found to be the best of the residual sprays, giving control for 40 to 60 days, with chlorthion second, giving control for three to five weeks. Methoxychlor and malathion came next, followed by lindane which did not show satisfactory results during the past season. In dry baits diazinon was found best with pirazinon second. New "Calcite" baits also performed well, as did chlorthion. Diazinon used in wet baits was rated as excellent.

Residual sprays were considered superior to baits, not only because

they were effective over a longer period, but also because they covered a broader range of flies. Baits are recommended merely as a means of supplementary control.

No significant results had been obtained with diazinon and pirazinon in fly control tests during 1954, it was reported by Roger Scott, Geigy Chemical Co., New York. This was contrary to promise shown by these chemicals in the previous season.

R. J. Hahn Dies

Rudolph J. Hahn, 47, vice-president and treasurer of Zonite Products Corp., New Brunswick, N. J., died Jan. 2, at his home in Westfield, N. J. He joined Zonite Products Corp. in 1927 as an accountant. Mr. Hahn attended night school and was granted a Bachelor of Laws degree from New York University Law School in 1932. He was advanced to secretary, treasurer and vice-president of Zonite.

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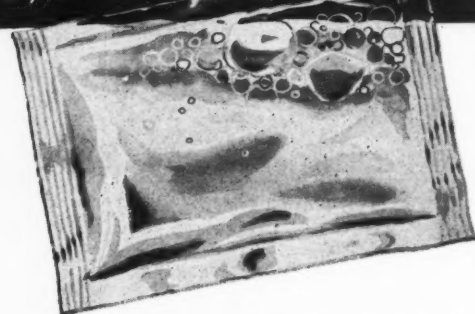
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Improves Tank Brush

Moran Brush Manufacturing Co., Hamden, Conn., changed to brass wire in winding its tank glass washing brushes, it was announced last month. This will eliminate all risk of rusting. The increased cost arising from this decision will be absorbed by Moran.

Howard M. Clark Dies

Howard Marshall Clark, 54, president of Dr. Hess & Clark, Ashland, O., insecticide and animal remedy preparations firm, died Nov. 29. Mr. Clark was the son of the partner of Dr. Hess, founder of the company. Mr. Clark was formerly active in Chemical Specialties Manufacturers Assn. and the organization when it was known as National Association of Insecticide & Disinfectant Manufacturers.

Welmaid Moves

Welmaid Manufacturing Corp., Chicago, recently announced the removal of its business offices to 690 Freeling Avenue, Bay Island, Sarasota, Fla. The firm continues its manufacturing operations in Chicago.

Vegetable Waxes

(From Page 145)

of the general quality of the wax but rather will help us in the sorting and refining processes.

Lots that pass this second test are therefore further tested in special quality tests which vary for different waxes. Carnauba wax, for instance, is tested for hardness, flash point, and resin content.

When a lot of wax has been found to conform to all these specifications we feel we have been successful in selecting wax of known purity, free from excessive dirt and moisture and of superior quality. We then ask ourselves the following questions:

1. To what end use should this wax be put?
2. Is it good for emulsions?
3. Should we bleach it?
4. Is it good for carbon paper, etc.?

5. What wax refining procedure should we use?

A pilot plant run of our process answers many of these questions.

Crude waxes contain many types of impurities that must be filtered from the wax. If the amount of colloidal impurities is high, filtration becomes difficult and costly, and we have found that pre-testing for filtration characteristics is essential to economical refining operations.

Wax which is satisfactory in filtration characteristics is earmarked for refining, and that which is unsatisfactory is rejected in its crude form. A filtered sample of the pilot plant batch is now tested for emulsifiability, for its solvent retaining qualities in an oil-wax paste, and for its bleachability. Our standard test for emulsifiability is the old Carbide and Carbon formulation of 20 parts of carnauba, 2½ parts of oleic acid, 3.3 parts of triethanolamine, 1.5 parts of borax, 120 parts of water plus a shellac solution. All waxes sold by us for emulsions must take a satisfactory polish with good gloss properties when applied to linoleum test panels. At this time we shall not discuss other tests for other industries because of space limitations but will be happy to supply same upon request.

Tests for bleachability are made by determining experimentally the type and amounts of bleaching agent required to bring the wax to a color equal to standards which we have set. It is interesting to note here that the color of the original wax does not always give a true indication of the color that will be obtained on bleaching. Experience is probably a rather important aspect of the bleaching operation, which will allow a blending of waxes in certain properties so that uniform finished products are obtained. This throws this bleaching part of the refining business more in the category of an art than a science. Such a procedure for thorough pre-testing and classification of crude waxes before refining may seem to some to be more elaborate than is

necessary to insure uniform finished products and may be considered by others as an unnecessary additional cost. It has been our experience that this is not the case. We have obtained higher efficiency and better economy through this pre-testing program and eliminated costly delays and tie ups. When dealing with a commodity as costly as carnauba, improved efficiency and yield does pay for the entire program.

The refining and bleaching of waxes is a highly specialized business. To insure a continuous supply of the numerous products required by industry, a great variety of crudes must be processed. In addition to the impurities such as sand, fibers, gums, resins, we also find water and moisture as a component. Every one percent of water is approximately the equivalent of 1c per pound and the pre-testing of the waxes will again make this analysis a very necessary part of the pre-testing program.

Wax Refining


THE refining of waxes can be accomplished in two ways.

1. Impurities may be removed mechanically such as by centrifugal force or by filtration.

2. They may be treated chemically to convert them to gases which escape or to colorless and harmless derivatives which remain in the wax.

Our refining process employs a combination of these two principles. The coarse solid impurities are readily removed by filtration while the small particle size impurities cannot be filtered out easily. The finer the filter cloth, the more quickly its holes are "plugged" by the smaller particles. To overcome this difficulty filter clays are used. These filter clays consist of particles of clay considerably larger in size than the particles of impurities they are to remove. These clay particles have a very spongy, porous structure, with a very high internal surface area. When such a clay is added to the molten wax this extended surface has the ability to

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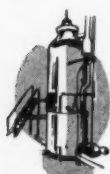
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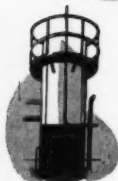
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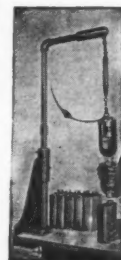
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hold loosely colloidal particles of impurities which otherwise become entangled in the filter cloth or paper and quickly fill all the holes so that no more liquid can pass. Activated carbon is another material with a high surface area which can be used in place of clay.

By the use of these filtering clays very small colloidal particles may be removed and grades of clay are available which are quite specific for such materials as resins, fatty acids, chlorophyll, etc. In fact, the recently highly publicized chromatographic test method to determine hydrocarbons employs the same principle and is actually a modified refining process in which the wax is dissolved in heptane and instead of filter clay a large excess of alumina is used. This alumina, by the same type of surface adsorption, attracts and holds on its surface everything except the very inert hydrocarbons in heptane solution, which pass through and are collected and weighed. In addition to clays and carbons, some diatomaceous earth is also added to regulate the density and porosity of the filter cake.

Bleaching processes generally use hydrogen peroxide as an oxidizing agent. The dissolved colored impurities, which vary in color from dark brown to green, are thereby bleached. Other organic peroxides are used on certain types of waxes although hydrogen peroxide is preferred in most instances. If extra light color grades are desired, a further refining step is used on the wax before treatment with peroxide. It has been found that a given amount of filter clay or carbon can remove more dissolved impurities if it is used in a two step process, in which the wax is filtered twice with half its clay used in filtration. By this process, the double refined grades are produced.

To show the importance of the hard wax imported into this country over the last three years, we give you estimated figures as received from the Department of Commerce, Statistics Division: 1952 — about 14,000 tons at a dollar valuation of

\$22,000,000. 1953 — about 12,000 tons at a dollar valuation of \$18,000,000. First eight months of 1954 — 8,000 tons at a dollar valuation of \$12,000,000.

To summarize all of the above, we would like to make the following points.

1. There is a definite and dire need for the setting up of iron-clad specifications.
2. Some time will be required before these specifications can be enforced on all shippers in Brazil.
3. The testing of wax in all stages is mandatory for a steady flow of good waxes.
4. The consumer will have to pay for these tests in form of somewhat higher prices or else he will have to sacrifice quality for price.
5. It is very important to deal with confidence and selectivity with your suppliers.
6. We give little credence to certain nomenclatures of Brazilian shippers and regions.
7. Wax refining is a specialized combination of art and chemistry.
8. In certain formulations and for certain uses it may be necessary to buy the best or highest priced grade of wax.
9. A close working together between consumer and supplier will readily establish the right grade and the lowest possible price for individual requirements.

Germicidal Wax

(From Page 137)

two coats of wax, and by approximately 99.5 per cent using one coat of wax. Under similar test conditions, one application of five per cent phenol solution reduces the bacterial population by approximately 99.7 per cent. The results would tend to indicate that the bactericidal action of the floor wax is comparable to that of a five per cent phenol solution, within the limits of experimental error.

It has been shown (11) that the spray resulting from sneezing consists of droplets of various size. 90 per cent of the droplets will be about one to 40 microns in diameter and rapidly become smaller due to evaporation. These droplet nuclei will remain air-borne, containing a few bacteria. The other 10 per cent of the droplets, however, will contain 90 to 95 per cent of the bacteria from the original secretions, and because of their size will fall to the floor almost at once. This high loading of bacteria is temporarily unavailable in the breathing atmosphere. However, later when the droplets have dried, the bacteria that survive are subject to being raised into the breathing atmosphere as dust by some form of mechanical activity and thus become a potential source of infection.

With this data in mind, *in vitro* tests were designed to determine whether bacteria sprayed on a wax surface, such as might occur by sneezing, would be killed by contact if the waxed surface was germicidal. Bacteria typical of a pathological upper respiratory condition are cocci, such as *pneumococci*, *streptococci*. Since it is hazardous to conduct tests by spraying these organisms in the air, the tests were conducted with *staphylococci*.

Procedure: 6 one inch squares of rubber tile were used for the test. Germicidal wax was applied to two tiles with a cotton swab and a competitive self-polishing wax purchased on the open market was applied to two other tiles in like manner. Water was used on two other tiles as a control. All swabbed tiles were allowed to dry thoroughly at room temperature. The six swabbed tiles were then sprayed uniformly with a 1:100 dilution of a 24 hour culture of *Micrococcus Pyogenes var Aureus* from a DeVilbiss atomizer. Five minutes after spraying, the tiles were placed in separate large test tubes containing 10 ml of F.D.A. nutrient broth and about 10 sterile glass beads each. The tubes were shaken thoroughly in order to remove the bacteria from the surface of the tiles and dis-



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TABLE III
EFFECT OF SIMULATED SNEEZE TEST
5 MINUTES AFTER SPRAYING

M. PYOGENES VAR. AUREUS	Germicidal Self-Polishing Wax	Conventional Self-Polishing Wax	Water
Bacteria per tile	690	136,000	152,000
% Reduction	99.5	10	---

tribute them uniformly throughout the broth. The broth was then plated undiluted as well as at serial dilutions of 1:10 and 1:100 into tryptone glucose extract agar. All agar plates were incubated for 48 hours at 37° C. and the bacterial colonies which had developed on the plates were counted with the aid of a Quebec colony counter. The figures are the averages of two determinations which agree with each other within the limits of experimental error. See Table III.

It can be seen from the above results that when rubber tiles waxed with germicidal floor wax are sprayed with a heavy contamination of *staphylococci*, the bacterial population of the tiles is reduced by approximately 99.5 per cent within five minutes, whereas, when tiles waxed with a conventional self-polishing floor wax are similarly treated, the bacterial population of the tiles is reduced by only 10 per cent in the same period of time.

At this point it must be emphasized that the data reported are the results of controlled independent laboratory studies. Field tests are currently in progress which we hope will answer the following questions:

1. What effect does soil retention and scuff marks have on the germicidal capacity of the floor wax?
2. Does ordinary damp mopping of a soiled floor previously waxed with a germicidal self-polishing wax leave a sanitized or bactericidal floor surface?

In conclusion, examples have been given of some types of products in which biologically active in-

gredients have successfully been incorporated. Independent laboratory data have been presented showing the activity of a germicidal self-polishing floor wax, presently undergoing test marketing. At a later date, we hope to be able to report the results of extensive field tests currently in progress at various institutions.

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Powder Aerosols

(From Page 141)

If the particles are too large and too hard to be crushed between the valve face and a tough valve seat, such as "Teflon,"⁽⁴⁾ a softer more resistant rubber seat may be necessary to effect a seal.

Valves should be operated wide open without attempting to

(4) DuPont brand polytetrafluoroethylene.

control or throttle the spray rate by varying the pressure on the actuator; otherwise, product may build up at the valve seat and make a tight shut-off difficult or impossible. Such valves are not only suitable for use with the selected propellant process but will facilitate the spraying of powders incorporating suspending and carrying agents.

Conclusions

IN summary, a process and means are available for dispensing many products in a powdered form from "aerosol" containers. This should lead to the eventual or increased marketing of such items as topical dusting powders, antibiotics, fungicides, foot powders, deodorants, dry lubricants, fire extinguishing agents, food products, absorbent powders, and insecticidal dusts in pressurized packages.

CSMA Meets

(From Page 155)

of "Disinfection of Porous Surfaces." Tests were carried out on battleship linoleum with various disinfectants in different dilutions. Duration of application and number of applications of the disinfectant solutions were found to be the most important factors. Daily single application is suggested for general purposes at concentrations commonly used on non-porous surfaces. If found insufficient repeated use is recommended, but even then disinfection is often found incomplete.

The last paper in this joint session was "A Multicycle Alternate Soil-Wash Test for Evaluation of Fabric Detergents" by R. Bernstein and H. Sosson, Industrial Test Laboratory, Philadelphia Naval Shipyard, Philadelphia. Mr. Bernstein read the paper. During an investigation of seawater laundry compounds a reproducible and accurate laboratory evaluation procedure was developed. The method does not employ standard soiled cloth but, instead, is based on the total loss in reflectance of white cotton swatches carried through a number of alternate cycles of soil deposition from aqueous detergent solution followed by a soil removal step in a fresh detergent bath. The soil used is an aqueous dispersion of a synthetic street dust, developed by the General Aniline and Film Corp., New York, and a small proportion of "Aquadag."

Test results in soft water, hard water, and sea water exhibit satisfactory reproducibility and correlate with practical scale wash tests.

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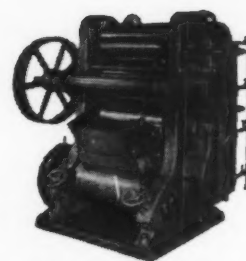
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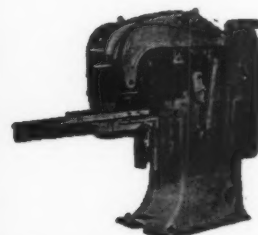
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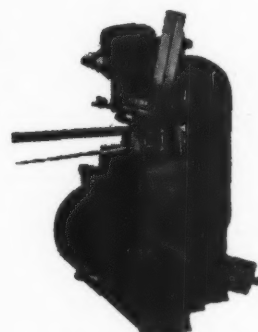
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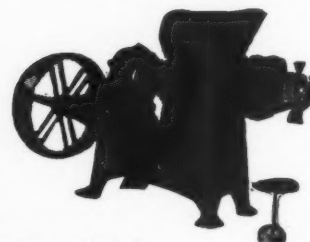
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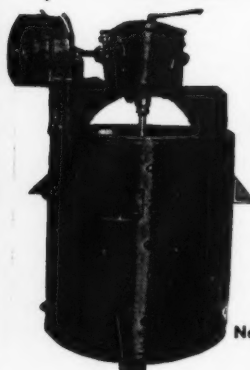
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- 6—R. A. Jones Automatic Pin Die Soap Presses.
- 2—R. A. Jones Automatic type E vertical soap presses.
- 3—R. A. Jones Automatic Type ET vertical soap presses.
- 8—R. A. Jones Automatic type K Horizontal, Simplex, duplex, triplex soap presses.
- 1—Pneumatic Scale Corp. Automatic tight carton wrapping now set for 3-1/4" x 7-3/4" x 5-1/2" carton with take away conveyor.
- 8—50,000 Gal. Vertical Storage tanks 21'-9" dia. x 18' high conical top, flat bottom.
- 2—11,000 Gal. Horizontal storage tanks 10'-6" dia. x 17'-5" long.
- 3—21,000 Gal. Vertical storage tanks 15' dia x 16' high.
- 34—8,000 Gal. Railroad tank cars with & without coils.
- 1—Stokes & Smith stretchrap machine—Max. Film sizes 10-1/8" x 10", min. 6-1/8" x 3", takes sizes 9-1/4" x 9-1/4" to 5-1/4" x 2-1/4".
- 1—Electrolift 2000 lb. hoist 3-60-440 explosion proof 20' lift.
- 1—J. H. Day single arm amalgamator Mixer 43" wide x 36" Length 48" deep, tilting type.
- 2—Soap storage tanks 9'-4" x 6'-8" x 8' deep open top, steam jacketed bottom.
- 4—Soap storage tanks 7'-10" x 10' open top.
- 8—Steel Storage tanks 6'-6" dia. x 7' high with coils. Assorted valves and fittings, new and used.
- 1—Houchin Aiken 6" Soap Plodder.
- 5—Houchin Aiken, 4-roll toilet soap granite mills rolls, 18" dia. x 30" long. 1—10" belt conveyor 9' long with motor and drive.
- 1—Resina Model LC Automatic Capping Machine late model.
- 1—1500 lb. Dopp CI Crutcher, Style A, Jacketed shell, reversible screw agitator.
- 1—W. J. Fitzpatrick, Model D, 3-speed S. S. comminuting machine.
- 1—Howes & 1—Bernard & Leas Bulk Bag packer.
- 1—Union Special Bag Stitching Machine.
- 1—Eastern Engr. 3 H. P. Portable Mixer, Model G8 3-60-220/440 — 400 RPM totally enclosed.
- 1—Fairbanks Morse Scale tank 31,000 lb. Capacity with 8' dia. x 8' tank.
- 2—Fairbanks Morse Platform scale 2000 lb. capacity.
- 2—Howe Recording Beam Scale 1000 lb. Capacity.
- 1—B. F. Gump Vibrox Packer.
- 1—Harders Soap Sampling Device.
- 1—J. H. Day 100 lb. Powder Mixer with Hunter Sifter.
- 1—2000 lb. Powder Mixer.
- 2—New Mixing Equip't. Co. D-1 1/2 H.P., 430 RPM, Portable Mixer.
- 6—Houchin Aiken Bar cutters.
- 1—1000 lb. portable elevator 5' lift.
- 1—J. H. Day 200 lb. powder mixer with motor & drive.
- 1—Triangle semi-automatic Auger Type Powder Filler.
- 7—U. S. Bottlers 2-spout vacuum fillers.
- 12—W. P. 150 Gal., 100 Gal. working capacity heavy duty, sigma blade paste mixers, jacketed for heating or cooling. Tilting type, with cover.
- 6—Houchin-Aiken Power driven Soap Slabbers.
- 2—Houchin-Aiken 8" Soap Plodder.

LARGE ASSORTMENT OF NEW & USED VIKING, GOULD, FAIRBANKS, MORSE & UNION STEAM PUMP CO. PUMPS WITH & WITHOUT MOTORS. AND MANY ADDITIONAL ITEMS.

ALL ABOVE IS SUBJECT TO PRIOR SALE

ALSO SEE OUR PAGE No. 172

For Sale

For Sale: Pneumatic Scale Packaging line complete; Houchin 10" jumbo plodder; Lehmann 14" plodder; Houchin 14" x 36" 5-roll inclined w.c. mill; Jones automatic laundry & toilet soap presses; Pkg. Machy. model TT and model N soap wrapping machines; 1500 lb. to 6000 lb. crutchers; 12" to 42" filter presses; powder mixers; paste and liquid mixers; Rotex screens; Hammer mills; soap frames; jacketed kettles; pumps; agitators; gluer-sealers, etc. Ask us to quote — Send us your list of surplus machines or plants. Consolidated Products Co., Inc., 59 Garden Street, Hoboken, New Jersey. Tel: HO 3-4425. N. Y. Tel: BA 7-0600.

For Sale: Reprints of article "Synthetic Detergents up-to-date . . . II" . . . 44 pages listing over 1000 detergent products by trade name, manufacturer, class, type, formula, manufacturer, class, type, formula and uses—price \$1.50. Remittances must accompany order. Available direct from author. John W. McCutcheon, 475 Fifth Avenue, New York 17, N. Y.

Full Up-To-Date Facts on Chemical Specialties. See page 54.

576 Pages of practical information covering formulation, properties, history, testing & uses of disinfectants, household & industrial insecticides, floor products, soap specialties, etc. Covers also the subject of labeling and packaging of insecticides, etc. See page 114 for further particulars.

Rating Detergents

(From Page 43)

Will we learn anything that we don't already know from the use of this soil? One method suggested for using radioactive soil to test the efficiency of a detergent in removing soil is to put a tracer into lamp black, then soil a strip of cloth with it. After the strip is washed in the detergent it will be checked for the presence of the isotope. Proponents of this method point out that even though the cloth seems to be white, there may be invisible particles of dirt remaining—they will show up

as clicks on a Geiger counter.

In the September 1954 issue of *Electric Appliance Service News* a writer visualizes the future repairman using a Geiger counter as another must tool in his kit and giving the consumer the hard facts about the whys and wherefores of her laundry problems. With a miniature laboratory for testing water hardness and purity and a black ray lamp for diagnosing clothes tears, be they from chemical damage or other causes, the super sleuth mechanic will indeed become a professional. Preliminary work will include the use of radioactive tracers to determine how various ingredients work. At present, the use of radioactive soil is limited to screening tests.

Only time and years of intensive research will provide an answer as to whether the use of radioactive soil will prove to be the standard test for the evaluation of a detergent.

Acknowledgments:

The writer is indebted to J. A. Woodhead, R. B. Diaz, and H. Patchel, of the Research and Development Department of Colgate-Palmolive Co., for the results reported in Tables I, II, III, and IV.

—★—

Klein District Manager

Carbide and Carbon Chemicals Co., New York, recently announced appointment of H. E. Klein as district manager of its Kansas City district. Mr. Klein joined Carbide in 1947 as a sales correspondent. Previous to his present appointment he held the post of assistant district manager in Kansas City.

Aerosol Survey

(From Page 147)

11%; 10% and 13%.

Other facts brought out by the survey showed that aerosol packages are about as attractive as other types of packages in the opinion of nearly half those stocking aerosols:

87% like to sell aerosol products; the reasons for liking to sell them including big demand, good seller, easy selling item, easy for customer to use and profitable; reasons for not liking to sell aerosols: too expensive, slow mover, defective valves, leakages; most outlets carried one or two brands of household aerosol products; the number of brands of personal aerosol products stocked was greater than household aerosols.

The survey also carries a section on promotion and display of aerosol products. Here, 55% of dealers stocking aerosol products rated them as very good display items, most listing their neat attractive appearance as the reason for so rating them. Counter displays were used most widely for all types of aerosol products carried. Drug stores were the largest users of window displays for aerosol products, with shelf displays second most widely used.

Airline Cleaners

(From Page 45)

floor cleaners create dust that is corrosive to aluminum surfaces. An oil absorbent is thrown on oil spots for the prime purpose of preventing accidents in addition to maintaining a better appearance of the hangar floors. Our asphalt tile office floors are maintained with non-skid waxes to prevent slipping. We not only insist on safety in flight but also insist on safe working conditions. We find that safe working practices pay dividends in much the same way as good public relations.

Hand Soap

WE use an all corn meal scrubber type hand cleaner. It is manufactured to the specification set forth by American Airline's medical department and as a result dermatitis has been held to a minimum.

The problems of American Airlines, which I have discussed, are very similar to the problems of the other airlines.

Van Dyk & Company, Inc.

Manufacturers of

RAW MATERIALS

for
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COSMETICS

for over half a century

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NO OTHER METAL SPONGE
does the job so FAST and EASY

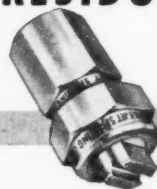
Kleenette Stainless Steel sponges are a necessity where hygienic cleanliness, low cost and safety are of primary importance.

Request **FREE SAMPLE** on your letterhead.

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Distribution of liquid particles are very important in residual spraying. TeeJet Spray Nozzles give you uniform distribution over entire pattern area . . . and proper atomization. Available in any capacity, nozzle assembly includes interchangeable orifice tip and strainer. Write for Bulletin 58.

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With $\frac{1}{8}$ turn of tip you have full range choice of spray from finely atomized cone to solid stream. Fits any TeeJet body or Trigger TeeJet. Write for Bulletin No. 63.



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The NEW No-Trax CHEVRON Molded Rubber Stair Treads

The NO-TRAX CHEVRON surface pattern is a distinct innovation — attractive, easy to clean — and long wearing. Diagonal and frontal bars catch light in a way that gives a two-tone effect, making the surface visibly pronounced. . . This is a desirable safety factor.

SIZES: 3/16" x 11" x 36" 3/16" x 11" x 48"

The 48" treads can be cut to make two 24" treads when needed. Two 36" treads can be butted together to make a 6 ft. tread or the 4 ft. and 3 ft. to make a 7 ft.; and 4 ft. and 4 ft. an 8 ft., keeping the appearance and continuity throughout the design.

NOSING: Square and curved

COLORS: Six marbled combinations

WEIGHT: 36" tread - 5.7 lbs. per tread
48" tread - 7.5 lbs. per tread



For Easy Installation
these treads may be ap-
plied with

**NO-TRAX
WATERPROOF CEMENT**

SUPERIOR RUBBER MFG. CO.

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Tale Ends

WELL, men, the 28th annual soap industry convention in New York is almost upon us once again. The dates are January 26 to 28, the first day being given over mostly to fatty acid and glycerine matters,—and then Jerry Babb, acting head of the Association, and also prez of Lever Bros., gives out with the prognosticating to open the main meeting January 27. The meeting ends on Friday eve, the 28th, with the annual wingding of a banquet and show in the ballroom of the Waldorf. By this time, Roy Peet, Scott Pattison, Malcolm Miller, Ted Frascinella, and others of the Association management will find their ulcers in full bloom again.

* * * * *

Close to 800 different aerosol packages were on display at the annual Aerosol Festival held last month in conjunction with the CSMA meeting. This included some 300 entries in the 1954 aerosol packaging competition, the grand prize winner of which was a hair lacquer aerosol put out by Lilly Dache of N. Y. Said Fred Lodes, chairman of the Festival Committee, after all the shooting was over and the prize awards had been made: "Next year we'll have twice as many!" Said Lilly Dache—famous for her hats, jewelry, and, incidentally, wife of Jean Despres, v.p. in charge of sales for Coty: "Thank you!" Said the Crown Can gang: "As usual, a Crown can won again!"

* * * * *

Get off your tail and get out and sell more sanitary supplies! That, we hear over the grapevine is Leo Kelly's secret slogan for the annual meeting of the National Sanitary Supply Assn. to be held in Atlantic City, N. J. come March 20-23. And Mr. Kelly tells us, the trade show this year is to be bigger'n better'n its ever been before,—it's to be held in the East first since NSSA held a room show at the New Yorker in the days when the association was smaller. Our prediction: It'll be back in Chicago next year!

* * * * *

A "lanolin enriched" rug cleaner was recently offered in the advertising of a leading Chicago department store. It's one of these sprinkle on and brush off deals,—and it's guaranteed to "dry clean rugs while adding lanolin to them . . . removes grease, oils, food, dirt, ink, gum and lip stick." Now, we always knew that lanolin was excellent for human skin. But for rugs? That's a horse of another color. How this new product can add lanolin to a rug and at the same time remove grease is truly a trick. Must use mirrors, or something.

* * * * *

The new Marine Corps huge Iwo Jima memorial statue in Wash-

ington has been given a couple of coats of a well-known floor wax. Inasmuch as the statue is of bronze and doesn't need too much protecting from the weather, we must look further for the reason. And what do you think it is? Pigeons! Just ordinary pigeons and other birds who decorate statues with their calling cards. The coat of wax makes it much easier to remove said calling cards along about cleaning time. Floor wax manufacturers take notice,—a new market.

* * * * *

Horrors! Bugs, live bugs that walk, in the apple pie served in the U. S. Senate restaurant. And who drew this lucky piece of pie? None other than Sen. Margaret Smith, Maine Republican. So, Mrs. Smith, outraged, promptly called for a \$15,000 investigation of the sanitation and insect control methods of the Senate eatery. What kind of bug it was, Senator Smith didn't say. When said beetle, roach or what-not crawled out of the pie and looked her in the eye,

the lady senator simply scrambled. Probably a mean trick by some disgruntled Democrat.

* * * * *

Recently we overheard two buyers of sanitation supplies discussing the merits and demerits of salesmen who called on them. They agreed that a clean shirt and shined shoes were an asset. And in concluding the discussion, one of the gentlemen stated: ". . . and in addition a good sanitary supply salesman should be just a little bit fresh." Well, maybe he's right, possibly a bit of brass helps sell. But, too much is dangerous. A smarty-pants wisenheimer can always queer a sale!

* * * * *

Just finished thumbing through the annual report of the Canadian Minister of Agriculture. In addition to supervising insecticides, livestock products, and a host of other things, the Department of Agriculture has charge of race track betting in Canada. In co-operating with the Royal Canadian Mounted Police, the Department supervises parimutuel betting at all race tracks in Canada operating under "the provisions of Section 235 of the Criminal Code." Hot dog! That's one for the book,—really bringing "improvement of the breed" right back to the farm.

Reminder



JUST like advertising. They don't get a chance to forget you if you keep your advertising always in front of them. They can't forget your firm or your products! Now, in the field of soap and detergent products, insecticides, disinfectants, floor waxes and polishes, aerosols, automotive chemicals and other chemical specialties if you want them always to remember you, the best reminder is regular advertising in

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**BUT THERE'S
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**Varco
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VarcoPine has captured the true forest green color from pine needles! And along with it a new, lighter, nicer pine scent with a decided tang! It is super-powered too. One gallon of VarcoPine makes 100 gallons of powerful germ-killing solution!

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| 1 Natural green color of pine needles. | 2 Immediately soluble in hard or soft water. | 3 Perfect stability. |
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